# The Builder.

No. CCVII.

*SATURDAY, JANUARY 23, 1847.*


A STATEMENT having been circulated to the effect, that an accident had occurred to the walls of Covent Garden Theatre, and that another architect had been called in, to examine the extent of the mischief and remedy it,—a confirmation or denial of the assertion was asked for from us by correspondents, and we were led to inquire into the circumstances and look through the building. The result of this is, that we can confidently pronounce the report a fabrication without the least foundation: no accident of any sort has occurred, and no fresh architect has been called in or hinted at.

In making the examination, a fact became known to us which requires to be stated, having especial interest at this moment, when the propriety of preventing the use of wood-bond in brickwork is a matter of question. The whole of the wood-bond in the lower part of the walls of the theatre had decayed entirely, and being of considerable size, 9 in. by 6 in., and even larger, had left the building in an evidently insecure state, only made known by the stripping consequent on the present reconstruction of the interior. In one wall, five bricks thick, it appears that bond on either side of it occupied a thickness equal to three bricks, and was quite rotten! The whole of the timber in this position has now been removed, and its place supplied with *brickwork in cement* to an extent of 800 feet, running measure, so that the building is now considerably stronger in this respect than it ever was before.

The cause of this entire decay within a comparatively short space of time, deserves investigation. Although perhaps, no other reason need be looked for than the effect of the wet mortar and damp brickwork in which the timber was set. The building was of course hurriedly carried up, and the bond (which was in the face of the wall) cased in at once by framing or otherwise, so that the moisture could not evaporate. When timber is placed in the centre of a wall, and so encased that the atmosphere is totally excluded, decay seldom takes place; nor is it likely to do so if, when placed in the inner face of a wall, it is first allowed thoroughly to dry, and then covered by the plasterer: provided, of course, that it be sound timber of a durable sort, and that the insidious access of moisture be prevented.

That it is desirable in the majority of cases to avoid the use of wood bond cannot be doubted. Apart from its shrinking, when not properly seasoned (and so leaving apertures and weaknesses in the walls), and the probability of decay in many situations, its use has often entailed the rebuilding of the walls of structures destroyed by fire, which otherwise might have been kept up. By the substitution of hoop iron bond, as the majority of our readers know, the evils in question may be avoided, and better work obtained, provided that the bond be properly fixed with occasional courses of brickwork in cement. The hoop iron (if pitched and sanded so much the better) should be strained tightly, the whole length of each wall in one piece if possible, and secured at the end by turning it up at right angles, and lapping it over the upper courses; connection at the angles ought not to be forgetten.

Bond timbers are valuable in new work by distributing the various weights, and preventing irregular settlements. The front and back walls of ordinary dwelling-houses, consisting for the most part of slight piers, indifferently executed in too many cases, are more likely to remain sound and unshaken when bond timbers pass through piers and openings (afterwards to be cut out), and so hold the whole together, until the work gets its bearing and consolidates.

An equivalent for this is not provided by the hoop iron *alone;* a cement bond is necessary; but unluckily the additional cost of this, small as it is, is sufficient to prevent the use of it, and so in many cases where wood bond is prohibited, the stability of the structure is made to suffer.*

A correspondent wished to be informed last week if we considered he might use bond-timber in 9-inch external walls; and he said further, that the district surveyor had told him he might not do so.

The second part of schedule D, which treats of external walls, says:—"With regard to other substances than the component materials of external walls,—there may be such *wood* and iron as may be necessary;" and recognizes the necessity of plate, lintel, and bond, by providing that they "must be fixed at a distance from the external face of the wall of four inches at the least." At the end of the clause, however, it says,—"But no timber must be laid into any external wall in such manner, or of such length, as to render the part of the wall above it wholly or in great part dependent upon the wood for support, or so that any such wood might not be withdrawn without endangering the safety of the superincumbent structure, except in the case of breast-summers."

The district surveyors do not consider this provision binds them to prevent the use of wall-*plates*, even in a 9-inch wall, because of the difficulty of doing so; but they feel themselves not merely authorized, but bound by the spirit, as well as letter, of the clause, in the case of bond, when other expedients may conveniently be resorted to, to object to the use of timber in such a situation.

As to a 14-inch external wall, we are disposed to think there is nothing, strictly speaking, to prevent the use of timber bond as formerly; nevertheless, we strongly advise all builders to avoid it, and adopt, as indeed is now almost universally the case, hoop-iron bond and Roman cement.†

After the above remarks were in type, it occurred to us to inquire at the Metropolitan Buildings office if the referees had expressed any opinion on this subject, although we knew that they had not published any award conveying it. We found that they had done so as far back as May last, in the shape of an award on a joint requisition from Mr. C. Oldfield and the district surveyor of St. Pancras, which the former gentleman had afterwards refused to take up. The matter being one of some importance, and the referees having taken a different view of the question from that which we have expressed above, we are glad to be permitted to bring their decision before the public.

The requisition required "the determination of the official referees as to the legality of inserting continuous wooden plates and bond along and in external walls, to carry the joists and timbers of the building; and whether such plates should be limited in size according to the thickness of the wall, for instance, 4 inches by 3 in a 9-inch wall, 9 inches by 4 in a 14 or 18-inch wall, or 4 inches by 4.

The said referees determined "first as to walls 9 inches thick, that inasmuch as continuous wooden plates 4 inches by 3 inches laid into such walls, would render such walls dependent on the said woodwork for support, and that such woodwork might not be withdrawn without endangering the safety of the superstructure, such construction would not be conformable to the rules as to the construction and materials of external walls in part 2, of schedule D, of the first-mentioned Act.

And secondly, as to walls 14 inches or 18 inches thick, inasmuch as continuous wooden plates 9 inches by 4 inches, or 4 inches by 4 inches, laid into the face of such walls, would render the said walls in great part dependent on such wood for support, and so that such wood might not be withdrawn without endangering the safety of the superincumbent structure, such construction must be deemed contrary to the rules of the said Act."

## SOME ACCOUNT OF THE ANCIENT CITY OF SYRACUSE.

THE ancient Syracuse occupied the first rank of all the cities of Sicily, or Magna Græcia, in point both of extent and political importance; and there are few remains of ancient cities, even in Greece herself, which are more interesting to the scholar or the antiquary.

I visited the ruins and the modern city in company with some fellow-students in the summer of 1822. The classical interest of the spot, the beauty of the situation, and the splendour of the climate (noted by Cicero for its sunshine in every day of the year) were such, that not even a week's painful imprisonment in the quarantine, on a subsequent occasion, could diminish my feelings of admiration for this renowned spot.

The present paper being principally devoted to the architectural description of the ancient city, I will not occupy the time of the meeting with a long account of its history; it will be sufficient for our purpose merely to refer to the tradition of its having received its inhabitants, in very early ages of the world, from Egypt and Phœnicia; that they were driven out by the Siculi, who, in their turn, were replaced by a colony from Corinth, led by Archias, one of the Heraclidæ, in the second year of the eleventh Olympiad, or about 732 years before the Christian era. The city was named by them Ortygia, or the island of quails (the same name was originally given to the island of Delos).

* In the majority of speculative buildings erected within the jurisdiction of the Act, we fear no bond of any kind is now used.

† The following extract from General Pasley's work on "Limes and Calcareous Cements" will serve to shew the strength of hoop-iron in opposition to a tensile force:

"The extraordinary resistance communicated to brick beams by longitudinal hoop-iron bond, the value of which has exceeded our expectations, induced us to try a few experiments on the actual strength of the hoop-iron alone, in opposition to a force tending to tear it to pieces in the direction of its length, and acting from one end, the other being fixed.

*First, with 1½-inch hoop-iron.*—Its thickness being what is described as No. 15 wire gage, or one-sixteenth of an inch nearly, and its weight per foot being 2,520 grains, or 3·6 lbs. Having fixed a piece of this hoop-iron in a vertical position, and suspended weights to the lower end of it, which we gradually increased, it broke down under a total weight of 6,163 lbs., after the iron had elongated thirteen sixteenth parts of an inch in the length of about 18 inches.

*Secondly, 1-inch hoop-iron.*—We next broke down a piece of hoop-iron 1 inch wide, of No. 16 wire gage, weighing 1,220 grains to the foot, by a total weight of 2,951 lbs., which produced a previous elongation of half an inch.

*Thirdly, ¾-inch hoop-iron.*—Finally, we broke down a piece of hoop-iron three-quarters of an inch wide, of No. 20 wire gage, and weighing 546 grains to the foot, by a total weight of 1,342 lbs., which produced a previous elongation of one three-eighths of an inch.

The results of these experiments agree very nearly with the statements of the strength of iron of this description in the works of Professor Barlow and Tredgold; and as the strength of iron has been fully investigated, and accurately stated, by these and other authors of reputation, we did not think it worth while to pursue this subject any further."

It has been suggested, that straps of 14-inch hoop-iron would be strong enough for connecting the rafters and tie-beams of roofs of moderate span, instead of ordering wrought-iron straps for the purpose.

We have the united testimony of ancient historians and poets to the effect, that the city rapidly increased until it arrived at so great an extent, and to such a degree of splendour, that Thucydides (long before it reached its summit of prosperity under Dionysius) acknowledged it to be equal in size to Athens; and Cicero mentions it, in one of his orations, as the *largest* and most magnificent city in Greece.*

The city was under different governments until freed from the tyranny of Thrasybulus, 446 B.C.; and sixty-one years afterwards it was usurped by the Dionysii, who were expelled by Timoleon 343 B.C. The celebrated part it took in the wars with Carthage, its memorable conflicts with the Athenians, and its sad and mighty fall, after enduring a three years' siege by the Roman conqueror, Marcellus, are events so well known to every scholar, as to require no further allusion to on my part at this meeting.

In after years, the Saracens completed the ruin the Romans commenced; and A.D. 827 Syracuse resigned to her rival, Palermo, the proud title of Capital of Sicily. From that time the city has dwindled into comparative insignificance. Her population at the present time does not exceed 12,000; and that commerce which once filled its glorious harbours with the ships of Rhodes, Alexandria, and Carthage, is now confined to a few speronaras engaged in a miserable coasting trade.

Syracuse is said to have derived its name originally from the neighbouring Marsh Syraco (now called *Il Pantano*), and situate on the right bank of the Anapus; it was afterwards called *Tetrapolis*, a city formed of *four* distinct quarters, and these were named *Ortygia*, *Acradina*, *Aycha*, and *Neapolis*.

According to Strabo, the circuit of the ancient walls was 80 stadiæ, or 22¼ miles, including the suburb of Epipolæ, which was to the westward of Neapolis, and commanded the whole city. At the extremity of Epipolæ was an almost impregnable fortress, called Euryale, mentioned by Livy, and other historians.

The great port of Syracuse—one of the finest in the Mediterranean—is about five miles in circumference. As you enter from the ocean, to the left hand is the rock Plemmyrium, distant from the opposite shore of Ortygia about half a mile. It was across this entrance to the port that the Syracusans, by advice of Hermocrates, threw a strong chain, and thus blockaded the Athenian fleet.

In modern times, the great port of Syracuse has its name connected with a glorious event; for it was here that Nelson revictualled his fleet previous to the battle of the Nile. The lesser port is on the other side of the island Ortygia; it was called Portus Marmoreus, according to some authorities, from the bottom having originally been paved with marble; but perhaps with more probability from the costly buildings which lined its shores.

I will now endeavour briefly to describe the four quarters of the city, commencing with the most ancient one. Ortygia was formerly considered the most important part, in consequence of its commanding the entrance to both the ports. The tyrants established their residences in this division, and added, from time to time, to the fortifications. The Romans also, when masters of Syracuse, regarded the situation of Ortygia in the same important light, and prohibited any native citizen from residing in that portion of the city.

The Temple of Minerva was the most sacred and important building in Ortygia: it now forms the cathedral, or duomo, to the modern city, to which purpose it was converted during the 12th century, when the Goddess of Wisdom was obliged to resign her shrine to "Our Lady of the Columns;" for such was the change in the dedication of this edifice.

The temple was of the Doric order, peripteral and hexastyle, with fourteen columns on the sides. The lower diameter is about six feet seven inches, and the height twenty-eight feet ten inches. The character of the order resembles the Agrigentine examples.† Twenty-one columns of the Peristyles, with portions of the entablature, are still standing; but, unfortunately, they are built up in the outer walls of the duomo. The two columns of the Posticum also remain. The columns, unfortunately, have been disfigured with modern plaster and additional mouldings; and it is much to be regretted that these, by some oversight, have found their way into an important work on Magna Græcia, and are there shewn as part of the ancient work. It was only after much entreaty and persuasion, and offering ample security, in case of injury, that the church authorities (who, unfortunately, in Sicily, are not so devoted to archæological pursuits as the clergy in this country) gave us permission to raise a scaffold, and clear away these unseemely encumbrances.

Cicero has given us an excellent description of the gorgeous magnificence of this temple, which, spared by the piety of Marcellus, was stripped of every thing but the roof and walls by the rapacious Verres. "Its doors," says the Roman orator, "were the theme of universal eulogy, exhibiting the labours of Hercules, curiously wrought in ivory, the angles of each separate panel being adorned with golden bosses of exquisite workmanship, while a Medusa's head, formed of the same rich material, shone above the portal, surrounded with its bristling snakes." We learn also from Athenæus, that upon the exterior summit of the roof was elevated an enormous shield, consecrated to Minerva, and visible to a great distance by the reflection of the solar rays. A custom prevailed among the Syracusan sailors, to secure a safe return from their voyage, of carrying from an altar near the Temple of Juno some ashes in a chalice, which, with flowers, honey, frankincense, and other aromatics, they cast into the sea as soon as they were about to lose sight of this shield. The interior of the walls of this temple were covered with paintings, amongst which was an equestrian combat of King Agathocles, one of the most esteemed works of Syracusan art: this, with twenty-seven other admirable pictures, did the unscrupulous Verres carry away. According to tradition, Archimedes drew an equinoctial line in this temple, and Mirabella says that in 1582 the commissioners appointed by Pope Gregory for the correction of the calendar came to Syracuse for the purpose of examining it. This building has suffered much from earthquakes, but I strongly suspect the hand of man has been the great destroyer: the modern façade of the Borromini school forms a strange mixture with the rigid Doric of the ancient peristyle.

Of the Temple of Diana, two Doric columns with a small portion of entablature alone remain. To judge of the effect of them is no very easy matter, for the columns are unfortunately encased by the walls of a modern dwelling, and the capitals are absolutely inclosed in a wretched closet. Notwithstanding this sad modern degradation of the great Diana's fane, these scanty remains possess considerable degree of interest, as belonging to the most ancient temple of Ortygia; and it is a curious circumstance, that the style of the columns, with the bold swelling capital, strongly resembles the order at Corinth, the mother city. The Selinus and Pæstum examples have also a great resemblance to it. The intercolumniation must have been very small, there being only 1 foot 6½ inches between the abaci of the two capitals. I am happy to state, that since my visit to Syracuse, the Duke of Serradifalco (a nobleman so well known to us all for his successful architectural researches in his native country, and for his contributions to the library of the Institute), has discovered the lower portions of these columns. Near this temple stood the celebrated Baths of Daphne, so named from a laurel grove sacred to Diana‡: the spot is now called Bagnara, and many remains have been discovered near it.

The celebrated fountain of Arethusa next claims our attention. This classic spot, sacred to the nymph to whom divine honours were offered, and upon whose shrine even Hercules sacrificed, still pours forth its abundant supply of fresh water as of old, but alas how different its present state! It is now the public washing place of the town; and when I saw it, a number of Hungarian soldiers were lounging around it, enjoying their merschaums, quite unconscious of the fame of the spot, or of the gibes and wit that the Syracusan laundresses were indulging in at their expense.

According to Diodorus, the celebrated building, the palace of sixty couches, which in magnitude and splendour was so superior to the temples, that the Gods, from jealousy, are said to have destroyed it by thunder, was situate in Ortygia. This, together with the palace and gardens of Dionysius, the citadel surrendered by Dionysius to Timoleon, the Palace of Hiero, afterwards the residence of the Roman prætor and proconsuls, and the workshops of the infamous Verres, have all disappeared, and their sites are now occupied with modern fortifications, and narrow streets of miserable dwellings.

I now proceed to the adjoining quarter of the city, called Acradina, described by Cicero "as the second city, containing a spacious forum, a beautiful portico, and an ornamental prytaneum, or public hall, from which Verres stole the inimitable statue of Sappho, the great work of Silanion!" Of these buildings there are now no existing remains. It is, however, probable that the Church of San Giovanni occupies the site of an ancient temple; and Mr. Hughes, in his admirable and elaborate description of the city, supposes it to have been the Temple of Jupiter, in which Hiero suspended the Gallic and Illyrian spoils presented by him to the Roman senate; and from a passage in which Cicero upbraids Verres for allowing a piratical corsair to sail into the port, and penetrate up to the very forum, we may infer that the forum was placed near the Isthmus.

In this quarter of Acradina are several of those Latomiæ, or stone quarries, which are so numerous in Syracuse. The most remarkable one is perhaps the one attached to the Capuchin convent, and now converted into a garden, forming one of the most beautiful and retired spots that possibly could be selected for devotional study.

There are also various subterraneous remains in this quarter, with vaults constructed of earthen pots, and the ruins of a bath excavated by Landolina, in 1804, in which was found the beautiful Torso of Venus, now forming the most valuable specimen of ancient sculpture to be found in the museum of the modern city.

The celebrated catacombs are in the quarter Acradina, and whether they are the works of the Syracusans previous to the Roman conquest by Marcellus, or subsequent to that period, is still a matter of conjecture. Mr. Hughes is inclined to attribute them to the Romans. At all events they are prodigious works. Denon describes them as a perfect subterranean city. The principal street or avenue in the catacombs is about eighteen feet wide and ten high, with numerous recesses and chambers on either side, with separate receptacles for the bodies, in one of which I counted no less than fifteen divisions. Swinburn relates that he saw a gold coin of the time of Icetas just taken out of the jaws of a body found in a tomb here: this must have been the *Naulon*, or Charon's fare.

Along the main street, at intervening distances, are transverse streets, forming at their intersections square and circular apartments, which are generally vaulted, and in some of them are conical apertures for light and air. Around these chambers are numerous recesses symmetrically formed. In some parts the walls are covered with fine stucco, and there are the remains of painting, with monograms and symbolical devices, the works probably of the early Christians. An old Capuchin monk acted as our cicerone in going through the catacombs, and the effect of his slow and solemn step, and the glare of the torches through this city of the dead, will not be readily effaced from my memory.

Of the walls of Acradina there are still remaining considerable vestiges, and the rock itself is in some places formed into battlements.

Not far from a gap in the rock, called Scala Græca, where the quarter of Acradina terminated, and that of Tycha commenced, may be traced one of the principal gates of ancient Syracuse, and which, like some of the other gateways, was admirably contrived for defence, the assailants being forced to expose their *right* side, which was unprotected by the shield, to a great length of wall, and the missiles of its defenders.

From Scala Græca a broad road traversed the city to the point Ortygia, lined on each side by strong walls and towers. Fazello states, that a little beyond it, in the quarter of Tycha, stood the town called Galeagra, wher

* Urbem Syracusas maximam esse Græcarum urbium pulcherrimamque omnium sæpe audistis.—Cic., Orat. 2, *in Ver.* lib. iv.

† I have shewn the capitals half the real size. The anta cap may be considered as a good example of the favourite Becco di Civetta, or Owl's Beak moulding of the ancients.

a Roman soldier, during the conferences of Epycedes and Marcellus, by numbering the courses of stone and computing their height, found the wall much lower than common opinion, and scalable by the ordinary ladders. By these means Marcellus took the city in the night, during a festival of Diana, when the inhabitants, more attentive to their superstitious observances than the means of defence, were in a state of great intoxication.

The quarter, Tycha, is described by Cicero as the third city; and he says it was so named from a Temple of Fortune within its precincts, and that it contained a spacious Gymnasium, and many sacred edifices. Of this once splendid quarter of the city little now remains, excepting large sepulchres cut in the rocks, channels of aqueducts, and vestiges of the city walls. To account for so large a space being so completely cleared of the remains of the numerous buildings which formerly occupied it, one is almost led to the supposition that, from the facility of transport given by the immediate vicinity of the port, the materials must have been transported to other shores.

Neapolis is the fourth quarter of the city mentioned by Cicero, and, as its name implies, was the last built. It was adorned with a theatre of vast dimensions, two superb temples—one of Ceres and another of Proserpine—and a very beautiful colossal statue of *Apollo Temenites*.

The theatre is perhaps the most perfect of all the ancient buildings of Syracuse. It was the largest in Sicily, and is computed to have contained 30,000 persons. Its situation, on a rising ground, commands a magnificent view over the ports and surrounding country. The greater portion of the seats are cut out of the the living rock.

In my examination of this edifice I had the great advantage to possess the elaborate and careful studies made in the previous year by Professor Donaldson; and as these have been given in so admirable a manner by that accomplished architect, in the supplementary volume of "Stewart's Athens," it is unnecessary for me to attempt a further description of a work already so familiar to the members of this Institute.

Above the theatre are numerous excavations in the rocks, remains of water courses, streets, and sepulchres. One, more perfect than the rest, is called the Tomb of Archimedes; and although the sepulchral stele, with the sphere and cylinder carved upon it, are no longer to be found to authenticate its identity, one feels unwilling to doubt that this must be the very monument discovered by Cicero, and pronounced by him as the sepulchre of the immortal Archimedes.

Not far from the theatre are the remains of an amphitheatre, which was also in part excavated from the platform of living rock. The arena, seats, corridors, podium, subterranean cells, and water-ducts are still easily traceable. The construction is evidently Roman.

The extensive quarries, or Latomiæ, are principally in this quarter of the city. They are said to have been excavated by the Athenian prisoners, and afterwards used as places of confinement. No greater contrast can be imagined than their former with their present state; for those once gloomy abodes of the victims of Dionysius are now flourishing with the luxurious vegetation of the pomegranite and the orange, and are watered by the transparent streams which still flow along the ancient channels; and the spot where the infamous Verres incarcerated not only Syracusans, but Roman citizens, is now termed "*Il Paradiso.*" In this Latomia is the church of San Nicolo; under which is a chamber excavated from the rock, 64 feet 6 inches long, 22 feet 6 inches wide; and from the remains of a water-duct at one end it was probably used as a reservoir.

I must not pass by the curious cavern called the ear of Dionysius, which is about 170 feet in depth, 35 feet in width, and 60 feet in height. It is stated that Dionysius constructed this cavern on acoustic principles, for the purpose of overhearing the conversation of the prisoners confined within its walls. There is beyond doubt a wonderful power of conveying and increasing sound in this curious vault; but an examination of it, including the somewhat hazardous ascent with ropes and pullies to the cavity near the top, impressed us with the notion that this power, as is the case with most echoes, is more to be ascribed to accident than to art.

Neapolis was also adorned by a colossal statue of Apollo Temenites, which stood proudly pre-eminent on a rising ground, and was preserved, says Cicero, by its magnitude, from the sacriligious grasp of Verres. Suetonius states, that it was contemplated by the emperor Tiberius to place it in the library which he had built, or restored, in honour of Augustus; but that he was prevented by the Deity in a vision.

The ruins of the Temple of Jupiter Olympius are situate on a gentle eminence on the right bank of the Anapus, overlooking the great port. Portions of the shafts of two Doric columns alone remain standing; but I am rather doubtful whether these are in the the original position. It is to be much regreted, that so little is left of this temple, which, in its original state, was described as the richest monument in Syracuse. In its adytum was placed the famous statue of Jupiter, esteemed one of the three* most noble representations of that deity ever produced, and from which Dionysius stripped off the golden mantle, replacing it with one of wool, accompanying his robbery with the impudent apology, that gold was too heavy in summer and too cold in winter for the king of the gods, but that wool was adapted for both seasons.

I believe I have now generally, though I fear very imperfectly, described the principal remains of the four quarters of the ancient city; and I will trespass for a few minutes longer only upon the attention of the meeting by making some short observations upon the suburbs and outworks.

*Epipolæ*, so celebrated in the sieges of Syracuse, is to the westward of Neapolis, on a spot (as its name imports) commanding the whole city. It was inclosed by Dionysius within those remarkable fortifications and walls said to have been constructed by him in the incredible short space of twenty days, and upon which he employed 60,000 workmen and 6,000 yoke of oxen.

It was also defended by a fort, which, according to Fazello, was called by the Greeks Labdalo, but Mr. Hughes is of opinion (judging from the descriptions of Thucydides and Diodorus) that Labdalo was considerably lower in the descent, and that the fort in question was the celebrated Hexapylon, a work constructed with extraordinary military skill and art. Mr. Cockerell (and I cannot appeal to a higher authority in these matters) states that he considers the remains of this fortress to be the most admirable specimen of ancient military architecture he had ever met with in all his extensive travels.

The principal entrance is admirably constructed for defence, with flank walls, from which the assailants were exposed to the attack of the defenders. Some of the walls are of solid masonry, 12 feet in thickness. Others, of that species of construction termed *Emplecton*,† are fifteen feet thick. At two of the angles of the walls are square towers of solid masonry, and there are several remains of fosses, twenty-five to thirty feet deep, cut in the solid rock, and defending the accessible approaches to the castle. In one part is a subterranean passage, nine feet wide and twelve feet high, leading in an inclined plane from the castle to the fosse, probably for the use of cavalry; and in other parts of the walls are small openings, about two feet in height, and sufficient to allow a man to creep through, by which the sorties were probably made.

The suburb of Epipolæ was terminated by a second almost impregnable fortress, called Euryale, mentioned particularly by Livy in his account of the siege of Syracuse, by Marcellus. In the seventeenth century the village of Belvedere was built on this spot, but no vestige of it now remains.

The river Anapus, so much vaunted by the poets and historians of old, is now a small stream, and its banks covered with lofty reeds and aquatic plants, growing so luxuriantly as almost to impede our progress in a small boat. We contrived, however, to reach the beautiful fountain of Cyane, a natural basin of about fifty feet in diameter, and celebrated by the poets as the spot where Pluto made his descent with Proserpine. We here saw the elegant Papyrus plant growing in great perfection, and it is said to be the only spot in *Europe* where this rare plant flourishes.

It has been remarked that there is no ancient example of any state so circumscribed in territory, extending so far and wide its influence, as Syracuse. In military fame she was equal to Lacedæmon, and contested successfully with the Athenians for naval pre-eminence! Her laws excited the admiration of Aristotle. The great Theban bard sung the victories of her conquerors in the games of Greece. From her power emanated the colonies of Acræ, Casmenæ, and Camarina. Her resources were so great, that Gelo offered to assist the Grecian states in their armament against the Persians with 28,000 troops and 200 *Triremes*, and, in addition, to supply provisions for the entire army of Greece, during the continuance of the war; and the perfection she had attained in the fine arts was such as to soften the hitherto rigid habits of her Roman conquerors, to refine their taste, and to excite and ensure their clemency.

Fazello tells us that her skill in works of gold, silver, and embroidery, was proverbial! The extent and magnificence of her buildings we have already adverted to. The superb medallions of Philistides sufficiently testify the superiority she had attained in the numismatic art; and of the extent of her sculptural embellishments we may form some idea from the remark of Cicero, that the Syracusans lost more *statues* by the rapacity of Verres than they did *men* by the *victories* of Marcellus.

The indefatigable Capodiecit presents us with a glorious list of warriors, statesmen, poets, philosophers, and men of science, whom he claims for Syracuse; and proud indeed must that city be which could produce Agathocles and Dionysius as commanders, Philistus as an historian! the poet Theocritus, and, greater by far than all these, her own Archimedes!

The achievements of the great Timoleon took place at Syracuse; within her walls the divine Plato for some time resided; the eloquence of Cicero was heard within her senate; and in later times the great apostle of Christianity tarried there on his way to Rome.

I trust this feeble attempt to describe the ancient Syracuse, will be excused, with all its imperfections; and most amply shall I be repaid if the interest of this meeting has been in the least degree promoted by a short account of that city, where the friendship of Damon and Pythias was fostered, and whose inhabitants derived their greatest pleasure in listening to the verses of Euripides!

SAMUEL ANGELL.

* One, in the Roman capital, from Macedonia; a second at Pontus; and the third at Syracuse.—*Cic. in Ver.*, 2, lib. iv.

† Plin. Nat. Hist., lib. 36, c. 22.

* Herodotus, lib. 7, cap. 157.

† The compiler of forty folio volumes on the antiquities of his native city.

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## THE DISADVANTAGES OF BUILDING COMMITTEES. ‡

MANY causes there are which operate to the continuance of existing evils; but if, on my own individual responsibility, I were called on to state the one which most of all conduces to hinder the advance of improvement in ecclesiastical architecture, I should attribute it to that monstrous anomaly usually known by the name of building committees. It is no theory which prompts the observation, nor is it any jealousy which would wish to confine to this society the care or the credit of architectural supervision, but it is the plain experience of many years which makes it almost a matter of truth to declare this opinion.

We may suppose that the type of these committees exists in the Metropolitan Church Building Association and the Church Building Commissioners. Now constituted as these bodies are of our superiors in the church, and with zeal and intention the most devoted and right minded, I am constrained to speak of them in no other terms than those of the profoundest respect; but what service they have done to the cause of church architecture every one who has had any experience of the matter very well knows. But why building committees are now to be formed in the country for building or restoring churches, one is quite at a loss to understand, for it is quite plain that they are the means of retard-

‡ From a paper by the Rev. Eccles Carter, read before the "Bristol and West of England Architectural Society." Although agreeing with it in the main, we are bound to say we have acted under committees, on more occasions than one, with the greatest satisfaction to ourselves.

ing the very objects they are professedly formed to promote.

It almost invariably happens that the persons composing them are selected from no knowledge of the subject, but from wealth or importance in other respects; and it is not unfrequently the case, that various and conflicting interests tend to promote disunion amongst them, and to nullify the effect of consultation. Consequent upon this system is that most pernicious one, putting up churches to competition, both as regards architects and builders; and when it comes to the choice and decision of plans and estimates, it very generally, and not unnaturally, happens that the cheapest is considered the best; the cheapest, that is for the present time, though posterity will have to mourn over the false economy of their ancestors.

It is enough to assert, that it is impossible for any architect to act under such influence, or to do himself or his cause credit, when he is canvassed and advised, cut down and perplexed by the contradictory statements of such a body. He is driven to the alternative of manfully refusing to listen to suggestions and alterations in his plans which he knows to be wrong, and so losing his employment; or of compromising his character as an architect, by perpetrating enormities suggested by the committee for cheapness or conveniences, but of which he has to bear the discredit. A good architect therefore becomes dispirited or disgusted; an indifferent and careless one becomes reckless.

It might be some evidence against a system, that I believe if every architect in England were canvassed on the subject, not one would be found to hold up his hand in favour of these building committees, constituted without reference to architectural or ecclesiological knowledge, and, in fact, without any further responsibility than their own consciences may suggest. It is a still stronger evidence against it that I have hardly known one man who had any knowledge of the subject, who did not bitterly lament having joined such a committee, and in very many cases has found it necessary to save his own credit by refusing to act upon it; and, moreover, if we may judge of causes by their effects, it is a staggering fact that the best instances of restorations of old churches, and the building of new ones, have been where no committee has acted, but one person has been responsible, though aided of course in his opinions by persons competent to give it.

If I am wrong as to fact, I beg I may be presently corrected. In place, then, of these numberless committees, rent by conflicting interests in themselves, and each one differing in opinion and knowledge of fact from the other, laying out for plans of designs by competition, and sitting in judgment on things by which the most experienced, under the same circumstances, might be easily deceived (for drawings and designs are very different from realities), instead of such a disjointed and cumbrous machinery as this, it would seem the most rational plan to have, when required, one body of men who should decide on the propriety of each particular church within its own district. And what body more proper than the committee of an architectural society, composed, as it is, of professional architects, clergymen, antiquaries, and others, whose business it is to make themselves acquainted with the facts and details of church architecture, and who, having no interest to serve, can have but one single object in view, viz., to rear a temple fit for God's service, the best that can be reared with their present means?

There is no occasion, then, for competition; an accredited architect can be fixed on for the work; and if, by the advice of the committee, any thing is done wrong, there is a responsible body, and every one knows who they are and where they are. The clergymen and churchwardens in each parish are the committee to whom the law has entrusted the care of the church. It is reasonable that they should discharge their responsibility by getting the best advice they can on the subject. But if they are not competent to fix on an architect, and to judge of the correctness of his proposals, they certainly are not competent to decide amongst a number of different plans and conflicting opinions. And as to their calling in indiscriminately, the opinions of persons no better qualified than themselves to give it, it would really seem as reasonable to send, in sickness, for a physician, and then to summon four or five of the worthiest friends one could find, to sit in judgment on his prescription. If, then, in any parish where a church is to be built or restored, the clergyman would seek the advice of an architectural, instead of a heterogeneous committee, and if any committee be required to act, let them be the responsible body. We should then see what is the use of architectural societies, not by the talk and noise they make in the world, but by the solid and substantial temples which would silently be reared for the service of God.

## THE NEW CHURCH IN THE CITY ROAD.

### EFFECTS OF THE WEATHER ON MASONRY.

The church, now in progress in the City Road stands within a crescent, which is on the north side, about an equal distance between the Angel and the Eagle Tavern. The style may be considered as late early-English, and though plain, is ably treated in all points, particularly in the mouldings. The plan consists of nave and aisles, chancel, a north chapel to the chancel, continuous with the aisle, and a tower in a corresponding position on the south. The north chapel is only to be distinguished externally, by a broader buttress of separation; but the tower projects a little in advance of the north aisle. The lower part of the tower will be groined, and this, and the north chapel open into the aisles, and the chancel, by large arches. A sacristy is placed in the angle between the north chapel and the chancel, the latter projecting some distance eastward. There is a turret staircase to the tower, and also one at the west, probably for an approach to the organ loft. The houses of the crescent approach so near to the walls of the church, that it has been necessary to cut off the angle of the sacristy—the door now being in the splay. The architect has also had to omit buttresses at the angles of the church, and to substitute a splay, the angle being corbelled out above. It is precisely such points as these, which become fortunate opportunities in the hands of an able architect; but they require a more than ordinary insight into the principles of the art. One who had a very moderate knowledge of the style he had chosen, or a partial acquaintance with examples, such as he had been accustomed to copy, relying only on such aids, assuredly would under such circumstances, fall into some glaring error, and such an example as that in question, furnishes a fitting, though slight illustration, of what we have often endeavoured to inculcate, in urging the importance of a perfect knowledge of examples, combined with the desire to learn their principles, and to use them as the materials, out of which to originate really new productions. The great sameness of character in many of the designs for cheap churches, already commented on, is a proof of the imperfect state, in which our knowledge of Gothic architecture still remains.—The piers of the nave are varied in plan, and will have alternately, moulded and foliated capitals. The entrances are one at the west, and a south door projecting with a gable head, so as to afford room for deeply recessed mouldings and shafts. The east end is lighted by five lancets. The windows of the aisles are of two lights, the space above the mullion being pierced with a quatrefoil. They are splayed out to a great width in the interior, after the manner of old examples. The materials used are Bath stone for the mouldings, and Kentish rag for the walls. The latter material has been disposed in irregular courses, this church being one of the few new ones, in which the material has been employed in the manner, recommended in a recent article published elsewhere. An opinion as to the comparative effect of this method, and that where stones in the courses, are used all of equal height, can hardly be formed till the work is pointed, and complete. Mr. Scott is the architect.

The severe frost, about ten days ago, did great injury to this building, as to many others in London. Every arch in the arcade which is erected, has suffered, the voussoirs being split, so that it will be necessary to replace them with new stones. The wall had been in a very damp state, not only from having been recently erected, but from the previous rain, which seems to have run down, and gained entrance at the top of the label. Two adjoining voussoirs have failed, in most cases, through the expansion of one, against the other. Too great care cannot be taken in protecting walls from the weather at this season, for although ordinary precautions be employed, serious injury may be done, as in this case, in a single night. It may be remarked, that the north side of the arches, that next the quarter from which the wind blew, is the only one in which the fissures are apparent.

## ON STAINED GLASS WINDOWS.

At the Decorative Art Society on the 13th inst., Mr. C. Cooper read the first portion of a paper "On Stained-glass Windows, chronologically considered," noticing such as were executed before the 16th century. He introduced the subject by stating, that his observations would have reference to stained-glass as a pictorial and decorative adjunct, classifying the principal features which characterized the works of several periods in ecclesiastical and public buildings. A brief description was given of the various properties of glass in use, such as *painted glass*, *pot metal*, *and flashed glass*, and it was said that England during the middle ages was not celebrated for manufacturing the more costly and beautiful tints, it being usually stipulated in the contracts of those times, that for the more precious colours none should be used "but glass from beyond seas." Painting upon white-glass was pointed out as producing muddy opaque effects of a perishable nature,—*pot-metals*, as being essentially brilliant and durable, and *flashed glass*, as allowing the partial removal of the coloured surface by grinding, as practised in the examples during the 15th and 16th centuries, or by the more economic action of the fluoric acid. The greater brilliancy and depth of colour produced by the two latter kinds beyond that in which the colours are painted on the glass, and subsequently burned in, was demonstrated, and it was said that a prejudice in the public mind as regards the decline of the art, might be attributed to the practice in later times, of using painted glass when attempting pictorial display.

The reader said, that the earliest notice of glass being employed for windows occurs in Bede's account of sending to France to procure glass manufacturers, and to bring them over to glaze the windows of the monastery at Weremouth in the 7th century, and which mission was successful. The artisans then brought over gave instructions to the English in the art of making glass for window-lamps and other works. Although the account given was not clear, as to the nature of the glass, made, he would infer that it was *coloured* glass from Walpole's having ascribed the introduction of painting into this island to Bede. The examples of the 9th century were said to exhibit barbarous attempts in delineating the human figure;—the Norman and Semi-Norman windows, as having considerable merit;—the 13th, 14th, and 15th centuries present progressive improvements in the art, with admirable fitness of design; but the 16th century, in the reader's opinion, witnessed the decline of the art, at least in the suitableness of the design to the material; which he explained to arise from attempts to produce perspective effects in which the drawing and foreshortening are accurately represented, but the figures and objects at various distances are of an uniform depth of colour. From the unsuitableness of the material, aerial perspective was never attained.

Mr. Cooper next entered upon an analysis of the designs and colours peculiar to the several centuries. Previously to the 11th century, representations of the human form were attempted in a rude manner, without any shading or pencilling; the colours being pot-metal, and the outline formed by the leading. The flesh and features were sometimes left in clear white glass. The subjects usually consisted of three or more figures—saints, kings, attendant angels, &c.—on a deep blue ground, and the colours were nearly always restricted to the primaries. With reference to the 12th and 13th centuries it was stated, that the general design is composed of geometrical forms in panels, either squares or circles, or portions of them. The vesica piscis being frequently met with (formed from the intersection of two equal circles at their centres), and also the

square, placed lozenge-wise. Although the design may be sometimes complicated, the ground-work will be formed by the square and the circle; and several diagrams were shewn in explanation of this view. Another peculiarity was adverted to: every geometrical compartment exhibits a complete picture; thus, a single window may contain from twenty to fifty perfect tableaux, chiefly scriptural, and sometimes presenting a complete and consecutive history. No perspective is attempted; and the background is usually deep blue, and sometimes red, black, or yellow. Letter inscriptions are to be met with, forming the base line, and surrounding the subject. The predominant colour, in effect, is a glowing purple or violet tone; blue and red glass being freely used, and the detail of the design, from the minuteness, being subordinate to colour. A great similarity was said to be observable between the works of this period, executed in this country, and those on the continent. Designs of windows in Canterbury and Lincoln cathedrals, and others at Bourges, Lyons, and Strasburg, were described and compared. He thence inferred, that the examples we possess were not executed in this country, or if so, that they were designed by Norman or French artists.

In the fourteenth century single figures and heraldry were more frequently introduced, other parts of the windows being filled by quarries, with foliage painted black, or partly yellow. A continuous pattern, with rosettes, pateræ, fleur-de-lis, &c., in full colours, and a surrounding border in rich colours, are peculiar to this period. Towards the end of this century, large canopied figures, occupying the whole light, are met with (as at Tewkesbury). These figures were treated in two distinct ways as regards the colouring, some having the whole background in rich colours, generally blue, and sometimes red, but no white glass appearing. In the other case, the backgrounds are clear glass and devoid of colour. The designs are in other respects similar. The reader supposed that the former were adopted in buildings having no painting on the walls, while the latter would; by admitting a considerable portion of pure light, be essential to the proper effect of mural decorations, tapestries, &c.

Pot-metals, it was said, were principally employed for all the coloured portions, and some curious accounts of expenses, &c., for preparing the tables on which the design was set out the full size, and for breaking, joining, and painting the glass, were quoted.

The paper will be resumed (and the remarks continued to the present time) at the next meeting of the society, on the 27th inst.

## TERRA-COTTA.

Sir,—I beg to make a few remarks on the subject of terra-cotta, in reference to a quotation from a contemporary, which appeared in The Builder of September 5th, 1846, depreciating this valuable and efficient material; stating, that it is unfit for interior use, and that it is very expensive. Now, I beg to say that this is quite a mistake; for it is from thirty to fifty per cent. less expensive than stone, and more durable than any building stone when the proper ingredients are used in mixing it, and well burned; for the high degree of heat to which it is subjected causes it to become a semi-vitrified substance, and renders it quite impervious to the weather. Frost or damp has no effect upon it; consequently, it retains a sharpness and surface unimpaired by atmospheric changes. The fragments of terra-cotta in the British Museum, upwards of 2,000 years old, will fully bear out this remark.

Nearly a century has elapsed since the introduction of terra-cotta into this country; and many works executed in it may be now seen unimpaired and as perfect as when first executed; while the natural stone in and about the same building, will in many instances be found to have gone to decay.

It is a material capable of high finish and good relief, and admirably adapted for all kinds of architectural decorations. I here give a few names of places where it has been used:—the gateway, &c., of King's College, and various works at Cambridge; the frieze, capitals, trophies, figures, fountains, &c., Buckingham Palace; the caryatidæ, and the whole of the architectural decorations at St. Pancras Church; the frieze and capitals of St. Paul's school; the capitals and other enrichments of All Souls' Church, Langham place; the colossal statue of Britannia on the Town-hall, Liverpool; the pediment (subject, death of Nelson), statues, &c., Greenwich Hospital; the vases on the terrace—front of Somerset House; the statue of Britannia, 12 feet high, and all the figures, &c., on the Nelson Monument at Yarmouth, facing the sea, the *stone* of which is *rapidly* decaying; the statues, &c., at the Bank of England; the rich Gothic screen at St. George's Chapel, Windsor; and other works too numerous to mention.

As you are a professed and able advocate for the advantage of the arts in architecture and building, I trust you will give this subject space in your valuable journal, rather than encourage the depreciation of a material that is really good, useful, and economical.

I am, Sir, &c.,

Hoddesdon. James Pulham.

## AWARDS OF OFFICIAL REFEREES.

### SMALL DETACHED OFFICE BUILDINGS.

In the case of a closet building erected without notice at Forest Hill, Sydenham, in the Lewisham district, the district surveyor laid information against the builder for the following irregularities:—

"The south wall of said building, being carried over soil pit on old wood bearer (without counter arch, and the floor-joist-ends also *bearing* on such wood bearer); also portion of back wall returning from quoin at south side, built on dry brick steining of four inch thickness for foundation thereof. The roof parapet walls not being of sufficient height, schedule D part 2."

The referees' award was: "that inasmuch as the building in question comes within the modification made under the authority of the Commissioners of Works and Buildings, dated the 5th September, 1845,* relative to small office buildings detached from any other building and from ground not in the same occupation to an extent equal to the height thereof above the ground, and not exceeding eight feet in height and half a square in area,—the said building is not subject to the rules of the first-mentioned Metropolitan Buildings Act, cited in the said notice of irregularity."

Costs, with the exception of those attending a hearing on the premises, required by the builder, to be paid by the district surveyor.

### THICKNESS OF INCLOSING WALLS.

With regard to four buildings of the first-rate, and four buildings of the extra first-rate, of the dwelling-house class, proposed to be built in Platt-street, St. Pancras, for the Association for Improving the Dwellings of the Industrious Classes,—the said buildings were to contain five stories, inclusive of the rooms in the roof thereof, and were in effect buildings of the third rate.

A requisition from Mr. Moffatt, on the part of the society, stated that,—"by schedule C, part 2, of the said Act, it is required that the external walls of the said first-rate buildings be of the thickness of 17½ inches in the three lowest stories, and thirteen inches in thickness, in the two topmost stories; and that the external walls of the said extra first-rate buildings be of the thickness of 21½ inches in the lowest story, and of the thickness of 17½ inches in the four remaining stories.

And whereas it is prescribed under the rule in schedule D, part 1, of the said Act, headed, "Thicknesses of inclosing walls to stories of buildings of whatever rate," if any such wall (i. e. an external wall) be abutted by cross or return walls within a length of 12 feet, and if not more than one aperture or recess occur within such length of 12 feet, and not more than one-half the quantity in length be taken out of such compartment of a wall by any such aperture or recess, then such external wall may be built of any thickness not less than 13 inches, notwithstanding the rate of such wall may require a greater thickness."

And whereas it is desired by the said W. B. Moffatt to build all such of the external walls, of all the said buildings as do not exceed 12 feet without cross walls, of the thickness of 13 inches, and, as the said W. B. Moffatt considers, in conformity with the said Act.

And whereas a difference of opinion has arisen between the said W. B. Moffatt and the district surveyor, touching the applicability of the last rule herein before quoted, the said surveyor being of opinion that the thicknesses prescribed for external walls in sched. C., part 2, are the minimum thickness for the rates of buildings to which they respectively apply, and that no departure may be made therefrom, other than such recesses in the said walls as the surveyor may authorize under the rule "construction and materials," in schedule D., part 2, of the said Act, and that the rule hereinbefore quoted applies only to any additional height of story beyond the usual height."

The referees were accordingly requested "to declare the true intent and meaning of the herein before quoted rule, and also whether the same may be applied, and does apply, to the external walls of the buildings in question, and to determine whether the said external walls may be built of the thickness of 13 inches only throughout, or in case the said W. B. Moffatt should think fit, of the thicknesses prescribed by schedule C., part 2, of the said Act for external walls of dwelling-houses of the third rate."

At the hearing, the following further question was also referred to them:—"Whether, inasmuch as there is to be no basement or under-ground story to the proposed buildings, and there is to be no kitchen fire-place and range, it will be necessary to build the backs of the fire-places on the ground, or lowest story, of the thickness of 13 inches."

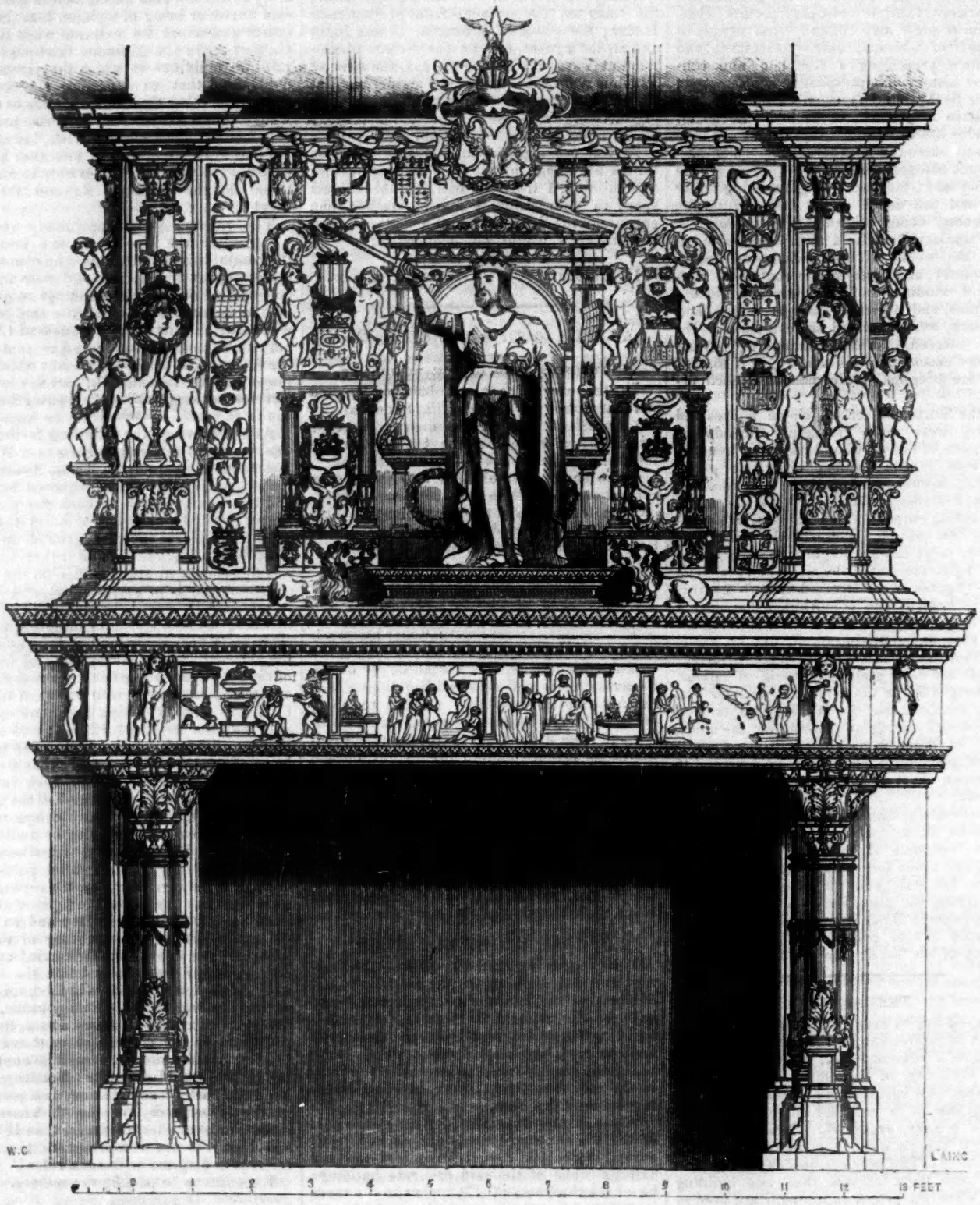
The referees awarded:—"That the rule in question (that is to say, the last of the rules in schedule D, part 1, headed, 'Thickness of inclosing walls to stories of buildings of whatever rate') does apply, and may be applied, to the external walls in every story of buildings of the first class, where such external walls are abutted by cross or return walls not less than 8½ inches thick, coursing and bonding therewith within a length of 12 feet; and that, if any external wall of the building in question be so abutted, and if not more than one aperture or recess occur within such length of 12 feet, and not more than one-half the quantity in length be taken out of such compartment of such wall, then such wall may be built of the thickness of 13 inches—so, nevertheless, that in the buildings of the central portion, the cross walls be carried up to the ceiling of the story next but one below the topmost story, at least 8½ inches in thickness; and so that in the wings (these buildings being of the extra first-rate) the cross walls be carried up to the ceiling of the story next below the topmost story, at the least 8½ inches in thickness. And as to the matter of the chimney backs, we do hereby further determine and award, that, notwithstanding the circumstances stated at the hearing of this matter, it will be contrary to the rules of the Metropolitan Buildings Act to build the back of any chimney in a party wall, in the lowest story, of the thickness of 8½ inches, or of any less thickness than 13 inches; and that it is not competent to the official referees to dispense with such rules."

Expenses to be paid by the society.

* See The Builder, Vol. III., p. 445.

Martin's Cement.—An injunction has been applied for by Mr. Stevens, in the Vice-Chancellor's Court, against Mr. Keating, to restrain him from infringing the original patent granted in 1834, for the manufacture of this cement. The specification of the patent now vested in the plaintiff claimed a right of manufacturing powdered chalk or gypsum, and a strong alkali, by neutralization with an acid, into a good imitation marble or cement, capable of receiving a high polish; and by another patent in 1840, alum, &c., were specified for mixing the materials in a solid state. The defendant in 1846, however, took out a patent for a cement, treating the mixture of gypsum with an acid and alkali as an old thing; claiming the use of borax instead of alum; and stating that he had obtained a contract for supplying the new Houses of Parliament with his new cement. The Vice-Chancellor held that the plaintiff had a *prima facie* right to the injunction; but that he must be put on terms to bring an action forthwith to try the validity of his patent.

CARVED FIREPLACE IN THE "PALAIS DE JUSTICE," BRUGES.




## THE PALACE OF JUSTICE AT BRUGES.

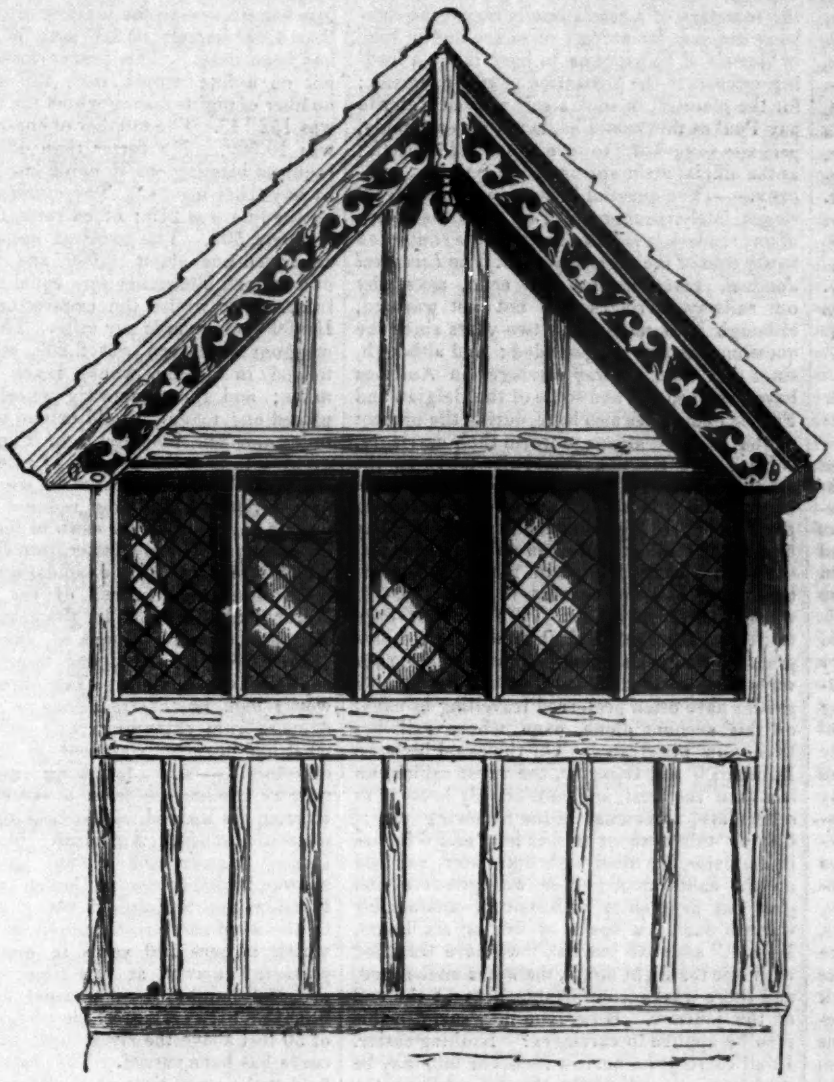
The appearance and condition of this interesting town must now be strangely different from what it was in the middle ages, when it bore the title of the Florence of West Flanders, and was well spoken of by Petrarch and other writers of the period, whether as regards historical associations, public institutions, or the succession of great men, Bruges has sent forth throughout Europe. She has fallen into comparative obscurity; still it is a place that must not be passed over lightly; there are still objects of no mean interest to command attention, and to my mind it still retains a more general air of antiquity than any other town in Belgium, and a ramble through its narrow streets, with the lofty and steep gables on either side, with here and there a house more richly decorated than its fellows, will bring to recollection some of Prout's finest drawings. No buildings will be found here comparable either as to extent or beauty with those of Brussels, Antwerp, or Ghent, yet the few that are remaining will well repay an attentive examination.

The grandest monument remaining of this once far-famed place is the church of Notre Dame, which is thus spoken of by Roscoe. "It rose to its present state from a small chapel, built by St. Boniface in 745, and dedicated to the Virgin; its length is 300 feet, and in breadth and height it is equally grand and imposing. The extent of the nave of the four lower aisles or wings, and of the swelling dome, presents a magnificent *coup d'œil*, and gives it an air at once picturesque, and of peculiar grandeur. The grand choir, in its dim religious light, the two magnificent aisles illumined by the splendour of the variegated and deep stained glass, all possess an absorbing charm to extort admiration from the coldest mind."

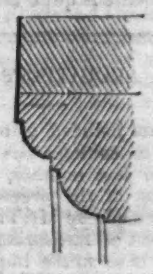
In this church is the monument of Charles the Bold and his daughter, Mary of Burgundy, the two last sovereigns of Flanders: it is a very rich and elaborate composition, but not equal in purity of design to many works of the preceding century. In the nave, near the entrance to the choir, stands a pulpit carved in oak, and in the same style as those generally found in Belgium.

But it is in the Palace of Justice that the most elaborate specimen of wood-carving is to be found. The exterior is modern, and presents little worthy of notice; but the room, known as the chamber of Charles the Fifth, well deserves attentive study. The whole of one side is covered by the most elaborate carving. The centre is occupied by the chimney-piece, shewn in the engraving, the lower stage of which is worked out of black marble, with the exception of the cupids and bas-reliefs (representing the history of Susannah), which are of statuary marble. The figure in the centre is intended to represent the Emperor Charles the Fifth; above him are

## GABLE AT IGHTHAM, KENT.



SECTION OF MULLION



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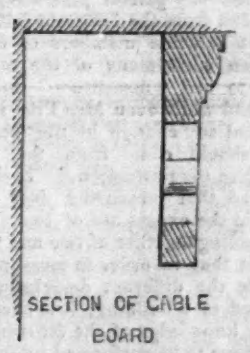

SECTION OF GABLE BOARD

placed the imperial arms; and around those of Spain, Flanders, Brabant, and the different members of the ducal house of Burgundy; on the right of the chimney-piece are statues of Charles the Bold and his wife, Margaret, sister to Edward the Fourth of England; on the left, the figures of Mary of Burgundy and her husband, Maximilian, of Austria. A very faint idea can be given by any engraving, of the exquisite manner in which the whole of the carving is executed. From a date on one of the sides, it appears that this elaborate work was done in the year 1529. At the time of my visit the whole was undergoing the most careful repair; and it was easy to perceive, that the men engaged on the work had fully entered into the spirit of it, and were anxious to make it as perfect as their skill would permit.

It is merely repeating an oft-told tale to say, that the same encouragement is here given to every branch of the fine arts, as in every other town in Belgium. There is a Royal Academy supported by Government, which contains schools of painting, sculpture, and architecture, besides numerous private collections of great merit.

Surely the attention of our own Government should be called to the fact, that in every considerable town of Belgium there are means of study provided and superintended by the Government authorities; while in England, with the exception of schools of design (not too well conducted) in a few of our large towns, there are no means provided by which the people may cultivate a taste for the arts. Still, we are rather better off than we were a century back, when some of our finest works in sculpture were executed by foreign artists. Upwards of twenty of the noblest monuments in Westminster Abbey are the work of two sculptors from Antwerp—Sheemakers and Rysbrack. W. C.

### OLD ENGLISH GABLES.

The accompanying example of a gable and barge-board will probably be found useful. Those generally supplied in architectural works being usually selected from the most costly examples, can seldom be imitated by the builder, yet the small unpresuming cottage gable is often as effective as the one of more elaborate design.

It is from a cottage at Ightham, in Kent. The construction is perfectly simple, and is explained by the accompanying sections.

### FOREIGN ARCHITECTURAL AND COLLATERAL INTELLIGENCE.

*Polychromism in Mediæval Buildings and Sculptures.*—At the restoration of the fine church at Reütlingen, Würtemberg, erected in the 14th century, a series of wall-paintings were discovered, and freed of the whitewash which overspread them. They are legends of St. Catherine, and a Passion, without much art-worth; still, interesting for German art-history. The Germans used, at this period of art-development, those colours still stronger, more brilliant and varied; and were compelled, therefore, for the sake of making somewhat apparent the effect of architectural form, which was *vanishing* under the colour, to use more sharp outlines and pronounced angles. Still, even then (in the 14th century), German art was exempt from those distorted shapes and broken-up forms, which disfigure its later periods, and would appear nigh impossible, if their deterring specimens were not before our eyes. The church of Reütlingen, and the adjacent castle of Urach, contain valuable specimens of German architecture and art of the 15th century, as the Saint Sepulchre and the font of the former, the oratory of Count Eberhard, at the latter place; some of which have been figured in Mr. Heidelоff's "Ornaments of the Middle Ages."

*Mr. Hübsch's Architectural Ideas.—Karlsruhe—The New Museum.*—This capital of the grand duchy of Baden is adequately progressing in its art-tendencies, and the new museum of fine arts belongs to the most prominent buildings of Germany. The architect, Mr. Hübsch, has therein put forth a sort of *art-credo*, having declared, that he is seeking for new paths in architecture, as Cornelius, Thorwaldsen, &c., have found for painting and statuary. Mr. H. thinks, that the monuments of high mediævity (*hohen Mittelalters*) and especially the basilicas, are *autochtonic*—and prototypes of form and the laws of construction, while other modern art-thinkers and critics consider them (conjointedly with their painting and statuary) as the last impairing eradiations of antiquity, from which, perhaps, only the huge structures of the times of the crusades may be excepted. However this may be, the museum has a decidedly monumental character, whose scope is perceptibly indicated by the statues and relievos of its porch. The front exhibits a perfect working out of the principle of *Trylogism*, and the different chief compartments, like portals, windows, &c., are arranged according to a certain consequential grouping. The chief cornice rises in the middle of the *façade* to a flat gable, but without any defined pediment, in the manner as we see it in ancient churches, as well as in the relievos of the ancients. Splendid and bold is the vestibule, with double ascent stairs, and large compartments ornamented by the frescoes of Schwind. The lower rooms contain casts of important sculptures of ancient and modern times, and some antiques. On the ceilings are depicted a series of mythologic subjects and allegories,

mostly after the hints of Goethe on the picture collection of *Philoctrates* of old. Very pleasant to the eye, and well matched with the light colour of the sculptures, is the light tint of the walls,—but the glaring contrast of the pedestals, a dark porphyry or sienite, does not deserve equal commendation. In the upper rooms pictures and drawings are exhibited, and the works of Overbeck, Schnorr, Veit, Hess, &c., are great ornaments of this collection. Amongst the cartoons lately exhibited, that of the four *Facultates* for the great Aula of the university of Bonn, is most remarkable. Amongst the pictures of ancient times, a portrait of a man and his wife, by G. Peecz, another portrait of a man, said to be of Hubert Van Eyck, a Holy Family, by Lorenzo Credi, &c., are worthy of attention. Especially interesting to our German neighbours is a portrait of Newton (wrongly, though, ascribed to Peter de Witte), as they say that its resemblance to Goethe is quite astonishing!

## SHALL ARCHITECTS MEASURE?

Sir,—I am induced to offer you a few observations, in consequence of reading the report, in your last number, of the meeting of the Institute on the preceding Monday, and the remarks made by Mr. Tite on that occasion on the subject of measuring. I quite agree with Mr. Tite as to the importance to architects of a knowledge of measuring, but I would ask how architects are to attain this very useful and important branch of the profession, while any person professing measuring is excluded from the Institute (albeit many of the most valuable members of the Institute have been what many of the architects are pleased to call "measurers" in their early days), and while even Mr. Tite himself considers that any change in the mode of measuring should come from the "operatives rather than the profession." It should be remembered that measuring does not merely consist in the expert use of two five feet rods, or the adding together of two and two to make four, but that in order to measure and *value* correctly the different descriptions of work contained in a building, it is necessary to acquire a knowledge of the different operations which have to be performed in order to attain certain results—of the different kinds and amount of labour in an elaborate piece of joinery; or to produce a Corinthian capital or cornice, or a piece of Gothic tracery from a rough block of stone. And here I would venture to suggest to Mr. Tite to ask some of the "operative" authorities in measuring, how they would fix a price to stone per foot cube, which should apply in such a case as I have alluded to, and at the same time to stone, as used by engineers in railway work, &c.

Returning, however, more immediately to my subject, I would observe, that the information thus gained is that which an architect requires in order to prepare a proper specification, and working drawings, for any work he may have to execute; and without which, instead of being able properly to superintend and direct others, he must always be at the mercy of his clerk of works, or other people. It is the want of this sort of knowledge which leads to the grievous results which we too often see in cases of competition (witness, as recent cases, the Kensington workhouse and the Dalston Literary Institution), where the real estimates are so much at variance with the amounts proposed to be expended in the first instance, and which tend to throw so much discredit and excite so much prejudice against the profession generally. I could enter much further into this subject but for fear of trespassing too much on your space and your readers' patience; but at some future opportunity, should you deem this worthy of notice, I hope to resume the subject.

In conclusion, I should like to be informed whether any of the candidates for district surveyorships have been examined on this branch of their profession. I know that in the list of subjects upon which it was proposed to examine the candidates this was included; but I am quite sure that some, had they been questioned as to measuring, would have been sorely puzzled, though in other respects taking, and deservedly so, a high standing.

I am, Sir, &c., G. R.

## RAILWAY JOTTINGS.

A new and rather an odd point of law was decided on Thursday week in the Court of Exchequer, in the case of Wilson *v.* Lord Curzon, to wit, that the only person whom the secretary of a provisionally registered company can sue, for arrears of salary due to him, is himself, if he happens to have taken a leading interest in the promotion of said company; for the plaintiff, in such a suit against Peter to pay Paul as this would be, is not unreasonably, perhaps, supposed "to have appointed himself," as the official main-spring of the incipient company.——The question of warming railway carriages, lately recommended by us to the notice of our readers, is still kept astir by the continued frosty cold of the present season. The *Liverpool Journal*, reverberating the echo, asks why our railway carriages are not yet warmed, although it is now nearly two years since the question was first propounded; and although, since that time, railway carriages in America have been heated, and some of the Belgian and French companies also have, during the present winter, adopted means to warm their carriages. "Have any English companies taken up the scheme? No, not one that we know of. Some may ask, is the thing practicable? or will it pay? It is easily practicable, and it will pay better than other outlay on any line adopting the plan. The swift boats on the several canals have long had the scheme in operation—to warm their best cabins. [We can not only testify to the fact, and the comfort, of this practice, on canals through routes where railways had not penetrated, but that respectable parties have often preferred travelling by canal on this account alone, even where railways have now penetrated. On the canal between Edinburgh and Glasgow, the worst cabins, no less than the best, are comfortably heated, as others are, somewhat in the following way:] Copper tubes, about 4 feet long and 6 inches in diameter, are filled with hot water, and laid on the cabin floor; these will preserve and give out heat quite sufficient for comfortable warmth during a space of five or six hours. Indeed," adds the journal, "we have travelled with one for eight hours, the water unchanged, and there was a comfortable heat at the end of the journey. How, you may say, can this plan be applied to carriages? Nothing easier. In all carriages a narrow recess or box may be made across and under the floor where the passengers' feet rest, betwixt the seats, but parallel with them; and if the make of the carriage frame will allow of an outside opening to put in the hot-water tubes, they may be fitted with doors. If this is not practicable, let the door be in the floor, and be perforated, shutting over the door, and then covered with the mat or carpet; this will equalise and diffuse the heat. One or two stations will require a boiler to heat the water; there must be tubes to hold it, and the present staff of porters would place them in the carriages in a few moments, even in the longest train. Think of going to London, or elsewhere, this cold weather, warm all the way, and with warm feet at the end. Reader, would you not give an extra shilling for such a luxury?" The great and universal importance of this subject in a sanatory point of view, no less than for the sake of mere comfort, on which health often so much depends, will be our excuse for devoting so much space to this section of our present jottings.——The London and North Western Company, it is said, realize no less than 20,000*l.* a year in rents from restaurants alone upon their various lines.——The grand central station about to be erected by this company at the Chester terminus of the Chester and Crewe branch is estimated to cost 80,000*l.*——The platforms for the Britannia and Conway bridges, on which the tubes are to be constructed, according to a contemporary, "are now in course of erection, and a considerable quantity of the iron is already manufactured. The platform at the straits will be 1,000 feet in length, with wharfs and sheds to protect the workmen. In a few weeks the construction of the tubes themselves will be commenced and rapidly proceeded with. The apparatus for raising these ponderous structures is also in a forward state, under the direction of Mr. Edwin Clark, the engineer appointed by Mr. Robert Stephenson to superintend the operations, and in a short time the aerial gardens of ancient Babylon will be more than rivalled by this modern monument of enterprise and ingenuity."——At the opening of the Lancaster and Carlisle line, the following statistical facts were stated by Mr. Mould, the contractors' superintendent, at the banquet given by his employers, Messrs. Stephenson, Brassey, and Mackenzie.——In the blasting of rocks no less than 4,800 barrels, or 200 tons, of gunpowder had been used. The patent fusees alone, if put on a line, would reach 400 miles. The number of nights during which the men worked was 152,147. The number of horses employed was 10,500. No fewer than 400,000 yards required blasting, as it could not be removed by any other means. The number of bridges on the line was 219; of culverts, 230; and of viaducts, 500. The greatest number of men employed was about 10,000, and the number of workmen altogether was equal to 3,000,000 in one day; whilst the excavations averaged 100,000 cubic yards per mile. The number of waggons employed was 2,200, which, if extended in a line, would reach nearly five miles; and the temporary wheeling planks, placed end to end, would extend to thirty-five miles.——The inhabitants of Penrith are beginning to reap the benefits of railway transit. The price of coal in that town, which has long been 1s. per cwt., is now reduced to 8d. per cwt., a saving of 33 per cent. to the consumer.——Galignani cites a letter from Bordeaux, in which it is stated, that dilapidations have been observed in the tunnel of the Paris and Bordeaux Railway, under the quarries of Bel Air, at Lormont. Some of the supporting piers have given way, and fissures are perceptible in the vault. The director of the works took immediate means to prevent the damage from extending; and information of what had occurred was sent to the board of directors.——The following matter-of-fact railway romance is from a sketch by Elihu Burritt, the learned, and something more than merely learned, American blacksmith:—During a storm and violent gale, the long railway bridge across the Connecticut, between Hartford and Springfield, was, *en masse*, lifted by the wind and thrown into the river beneath, which is here 200 yards in breadth, with a powerful current, at this time swelled to a dreadful height by an unusual flood of rain. The line here crosses by the bridge at a height of 50 feet above the river, and after an abrupt curve has been passed. The train left Springfield at the usual time on the present occasion, when there were no electric telegraphs, we suppose, to announce the peril in the way. "The storm raged violently without," says Elihu, "but the passengers within congratulated themselves on their comfortable situation, thinking of the pleasant homes and firesides which they soon expected to reach. On came the train—the engine blowing off its head of steam—breasting its way nobly against the gale, which almost threatened to check its progress, and the hot iron hissing furiously in the falling rain. No one knew or even suspected that the bridge was gone. For two years, by day and night, the trains had passed and repassed, until safety had obliterated a thought even of the possibility of danger. But no bridge was there to receive them, and the long train, with its precious freight, rushed swiftly on to this precipice of destruction! It was not customary to stop there, except to check the speed for the landing of passengers; but the people there had learned the loss of the bridge, and kept a sharp look out for the approaching train. It comes! The word is given, and—they are safe. Every heart leaped from its place, and the head swam giddy with fear, as the thought came of that fearful leap in the dark, and long will the passengers remember that dreadful ride, and the friendly, yet fearful cry, 'The bridge is gone.'"

Labourer's Cottage: Premium for Design.—In addition to the list already published, the Society of Arts offer a special premium of thirty guineas for the best design and working drawings of a labourer or workman's cottage, to combine cheapness with convenience, comfort, wholesomeness, and neatness. To be accompanied by a specification of the works and internal arrangements, and an estimate of the cost in the district where the designer lives. The drawings are to remain the property of the designer, with the condition only of their immediate publication.

## HAYDON'S VIEWS AND OPINIONS.*

*Public Taste.*—The people of Britain are often blamed for not having taste for this style or that. First they are told, they have no taste because they perceive the extravagance of the German school; then they have no taste because they abhor the false view of nature in the French school; but you never find them having these objections to Titian, to Raffaelle, or the Greeks. Believe me, to me these are evidences that my countrymen are organized to receive true impressions from nature, and not false ones; I believe the people, and know them to be in advance of the production; and if our statesmen would back their sympathies for good works, we should soon see productions which would put a stop to this calumnious and offensive censure.

*West, Fuzeli, Flaxman, and Stothard.*—Never were four men so essentially different as West, Fuzeli, Flaxman, and Stothard. Fuzeli was undoubtedly the mind of the largest range;—West was an eminent *macchinista* of the second rank;—Flaxman and Stothard were purer designers than either. Barry and Reynolds were before my time, but Johnson said, in Barry's Adelphi, "there was a grasp of mind you found no where else;" which was true.

*Imitation.*—I hope I have impressed you all with this leading truth, viz. in an imitative art, the knowledge of how to imitate is as important almost as how to invent; and the man who affects to despise the means to imitate, does not see farther than the great men before him, but not half so far. It cannot be too often repeated in the British school, that none of the elements of design must be neglected; if you cannot draw, or colour, or invent, or light and shadow, or compose, you are not a painter, and never will be entitled to the name. The great men before us did not obtain their fame by such conceited folly; and if such folly be not held up to eternal reprobation, it is a disease which will return like any other epidemical tendency, till entirely branded out of the art.

*Discontent in Artists.*—This disposition to hope for the future, regret the past, and despise the present, is innate in human feelings; and has always been the characteristic of men whose imagination predominated over their reason in all things. No genius was ever encouraged to the full extent of his own desires, and all men attribute their failure, or their obscurity to every other cause but their own want of conduct, their own want of talents, or their own deficiencies of understanding. The seeds of discontent must ever exist in a nature which lives for ever in a vain struggle to realize the visions of an unlimited conception! What, after all, were the chambers of the Vatican?—the Sistine Chapel?—or the Lesche at Delphi, with what their great inventors could have done, or did imagine, in a state of being unlimited by space, unchecked by the depravity of crime, the feebleness of disease, or the wretched limitations of a miserable earth, but twenty-four thousand miles in circumference?

*High Art in England.*—The people are decidedly alive to the importance of grand art here in England, and have always crowded to where any grand works of art are to be seen; but the enthusiasm of the people has never been seconded by the state; and the great works successively produced these last fifty years, which have rescued the country from the stigma of incapacity, are hidden from the public eye after the first ebullition, rotting, forgotten, and neglected, till a new season, and a new subject, a cow with two heads, or an ass with three legs, obliterate the recollection of either. Within my own time, works of all classes of art, which, if collected in one gallery, would inevitably set British art in its true colour before the world, have been shewn and decayed. In fact, I am quite correct in stating, that in no two schools in Europe could an equal number of works be shown, with all their faults, containing so much genuine and native excellence; and yet, owing to our want of a local habitation, a native resting-place for the *élites* of our productions, we have no decided character in Europe, and, till we have such gallery, we never can. Every illustrious foreigner goes away with contempt, on the whole, for the genius in England in the arts; when at this very instant there are works in cellars, or lost in the obscurity of private collections, which, if centralized in a National Gallery, would place English art for ever on a basis of the proudest hope; and prove, if such were her productions in spite of her obstructions, what might reasonably be expected from a condition of liberal and annual state support. It naturally occurs to every foreigner, what is the reason? The reason is naturally found in the various influences of our social condition. To the various number of our influential societies, each acting on the other, and all combined, like Freemasons, to assist each other, in opposition *rather* to all independence of thought, or abstract principles of conduct, than in support of it.

* Lectures on Painting and Design. By B. R. Haydon. Vol. II. London: Longman and Co. A volume of great value and interest.

## NOTES IN THE PROVINCES.

The tenders for the erection of the Warstone cemetery chapel, cloisters, and other buildings, of the Church of England Cemetery Company, were examined on Tuesday week, according to *Aris's Birmingham Gazette*, and the successful competitor was declared to be Mr. Barton, of Lambeth. The other works at the cemetery have been carried on as rapidly as the late severe weather would allow, and the completion of the whole establishment towards next autumn, is anticipated. "The style of building," says our authority, "is Gothic, and what is termed the decorated English, but with a strong tendency, in its profuse ornaments, to the florid, or perpendicular style of the 14th (15th) century. The building itself is cruciform, and consists of a chapel, with a long range of open cloisters running north and south, and a tower and lofty spire projecting in front from the centre of the cloisters. The length of the chapel, &c., from east to west, is about 90 feet; the cloisters, from north to south, upwards of 150 feet; and the height of the tower and spire 116 feet. Below these buildings are a crypt, and a range of catacombs for the reception of corpses, and a tunnel communicating with a double row of circular catacombs. On the west front the main buildings will be of white Derbyshire stone; and the circular catacombs in front of red sand-stone, in keeping with the nature of the ground in which they are made. The cloisters are pierced on the west side with highly decorated windows, but have the east wall blank, for the reception of monumental tablets to the memory of the dead. The levelling and preparation of the ground are now nearly complete, and ready for planting, as soon as the weather permits."——Among other improvements talked of, as likely to be carried out in Dorchester, is that of a new street, to throw open the hospital from the County-hall, by the removal of the dilapidated property opposite; and the building of a fashionable crescent, to be called, "Colliton Crescent," with a north-west view of the scenery around.——The Earl of Verulam has given the munificent sum of 1,500*l.* towards the endowment and building of the proposed new church at Lavistock-green, St. Albans. His lordship has also given a piece of land as the site for the church.——At Bristol, meetings of operatives and of rate-payers have resolved to recommend the town council to postpone all furtherance of the Street Improvement Bill, until the dock question has been pushed onwards to a settlement in the anticipated negotiation between the Dock Company and the Free Port Association; means for completing which would require to be provided by the citizens, while it is admitted that the contemplated improvements,—one of the first of which is the formation of a new street from Bristol bridge to the railway terminus, a sort of Bristol Piccadilly, will in all occasion an expense of 3,000*l.* a year, which it would be inconvenient to incur simultaneously with the raising of the anticipated resources necessary for the Free Port Association scheme. And besides, as observed at one of these meetings, "a lunatic asylum, to be erected at an expense of 20,000*l.*, was hanging over their heads."——A "Bristol and Bath Economic Conveyance Company," announces the not now altogether unprecedented advantage of transit for the million at one penny per mile, by omnibuses, or, rather, by omnibi, as classical reporters, by a somewhat singular sort of double plurality, prefer to term it.——A separate article on "Liverpool" appears in our present impression.——The solicitors' bills for obtaining the Bury Improvement Act alone amount to the sum of 3,695*l.*——A sanatory committee has been appointed at Doncaster to discuss the subject of the sanatory condition of the town.——The sewage of Aberdeen is valued at 300*l.* to 400*l.* per annum, and doubtless, under the economical superintendence of sewage or chemical manure companies may be made worth a great deal more. Arrangements are being made for its application to agricultural purposes.

## NEW ROMAN CATHOLIC CHURCH IN SHEFFIELD.

A church of considerable size and pretensions, dedicated to "S. Marie," is about to be built in Norfolk-row, Sheffield, from the designs of Messrs. Weightman and Hadfield, of that town. The *Sheffield Times* gives an engraving and description of it, from which we learn that the plan consists of a nave and aisles, a transept, a chancel with two side chapels, and a loft at the south side, in the transept aisle, for the organ; a second aisle on the north side of two bays for a requiem altar, and a tower, in which will be placed the font and baptistery. There will be an entrance porch at the south side, in Norfolk-row; and there will be a portal near the transept for the clergy and church officials. There will also be entrances at the west end and north side. A large vestry will be placed at the south side, east of the transept; and a cloister will be formed from this part of the building to connect it with the church.

The dimensions of the church are to be as follows:—

| | Feet. |
|---|---|
| Length of the nave to the chancel arch.. | 105 |
| Width, including the aisle ..... | 61 |
| Transept, from north to south ..... | 85 |
| Chancel up to the arch ..... | 40 |
| Whole length of the church, from east to west, externally ..... | 154 |
| Whole width, with the transepts ..... | 92 |
| Height up to the ridge of the nave..... | 60 |
| Height in the aisles..... | 20 |

The architectural style of the church is designed after the cross church of Heckington, in Lincolnshire, a specimen of the decorated style.

The south part, towards Norfolk-row, is very interesting. The tower, which stands at the south-west corner, is buttressed in stages with canopy heads, having windows in the south side to light the baptistery. In the next stage is a tabernacle and statue of the Virgin. The next stage has four windows of two lights for the belfry story.

The tower is crowned with a coronet and battlements, and has four hexagonal pinnacles, crocketted and engaged to the spire, with an opening through the *arc boutant*. The spire has crocketted openings in alternating stages, and is surmounted by a cross and weathercock. The total height, from the pavement in Norfolk-row, is 200 feet.

The south porch has canopied buttresses, with niches for the four Doctors of the Church. The parapet is panelled in wavy lines. The gable will be surmounted by a cross. The doorways will be moulded, and the porch will have stone seats. The south aisle has two windows betwixt the porch and transept, separated by a buttress, niched for a statue of S. Paulinus, first archbishop and apostle of Yorkshire. The transept will have a four-light window. The chancel window will have seven lights, the head filled with tracery. It is intended to represent the principal events of the life of the Virgin in stained glass. The clerestory will have large three-light windows.

The north side of the church, though not much seen, will be properly carried out in all details; and the same remark applies to the west end, in which there will be an entrance doorway deeply splayed, and a window of four lights rising into the gable.

The north entrance doorway will be under the second window of the north aisle, running into it, having a sunk niche and bracket for a statue of S. Michael.

The chapel on the north-east side of the chancel will be for the reservation of the sacrament. A turret-stair ascends from this chapel to the rood loft, and it is crowned with a crocketted spire for the angelus bell.

## LIVERPOOL.

The local sanatory Act is already doing its duty. "Steamers, instead of vomiting forth huge columns of black smoke, have been compelled to bring science to assist them in its consumption, and while the atmosphere on the river and about the pier heads is much purer, the unsightly nuisance which reflected such odium on this community has disappeared," and, together with it, the waste of a full third of all the fuel hitherto not consumed, as it now is, to the profit of those compelled thus to act no less without both annoyance and evil to others, than with both profit and good to themselves.

Besides the smoke nuisance, the Act contains various clauses respecting other nuisances and improvements, an abstract of which, though at some length, and from a merely local Act, we shall give without deeming any apology requisite, since doubtless, such provision for health of towns in general will be ere long no more merely local, but made generally applicable, either by the passing of numerous separate Acts or by the enaction of some one comprehensive measure, of a similar description, for the sanatory regulation of towns throughout the empire.

The Act in question, then, contains effectual and summary provision for preventing nuisances and annoyances in streets, or near thereto, and effecting cleanliness therein;—for registration and inspection of slaughter-houses and knackers' yards, and for removing filth therefrom at least once in every twenty-four hours, and keeping a sufficient supply of water in them;—for regulating the manner of keeping swine, and preventing the keeping thereof within any dwelling-house or knacker's yard, and for describing the limits within which it shall be lawful to keep the same;—for regulating the duty of scavengers, and the management of public privies and urinals;—for regulating the removal of the contents of midden steads and privies, and for preventing foul water soaking from any premises, and also for preventing any such middensteads or privies, or any hog-sty, dunghill, or manure heap from being a nuisance;—for registration of lodging-houses, and maintaining cleanliness therein under a penalty of 40*s.*, and in case of a continuing nuisance, of 5*s.* a day. Similar penalties are to be inflicted for other nuisances. A medical officer of health is to see to the healthiness of dwellings, and the purification and white-washing of houses; and an inspector of nuisances is to act in his own proper province. The escape of gas is to be visited with a penalty of 5*l.* a day after twenty-four hours' notice, existing gas companies to be relieved from previous double penalties. In future, no house to be erected shall have any rooms less than 8 feet in height, except cellars, 7 feet if to be inhabited, or otherwise 6 feet. Every inhabited room must have one window 5 feet by 3 feet, or 15 feet in area; attic and cellar windows 3 feet square, or 9 feet in area; all to be casements opening on hinges or pivots, or double opening sashes. Every new house must be provided with an ash-pit, and a properly constructed privy, with a funnel or flue to carry off any offensive stench. The council may enter premises to cleanse or repair privies, cesspools, or drains, and recover the expenses. House drains, at a proper level, must be made on twenty-eight days' notice, wherever a sewer of sufficient size and proper level passes within 30 feet of any part of the house, and all gully holes of sewers or drains must be properly trapped, to prevent escape of noxious effluvia; a penalty of 5*l.* to be incurred for infringement of provisions for proper construction, stopping, or unstopping, of drains, &c. A map of all existing sewers, drains, water pipes, gas pipes, &c., on a scale of 60 inches to the mile, is to be kept at the Town Hall for inspection by owners of property. No street, being a carriage road, shall be made of less width than 30 feet, including footways of 5 feet clear on each side; and no house shall be built in any street of greater height than the width of such street; no court shall be built of less than 15 feet in width, with an open entrance the full width of the court; these latter provisions all under penalties of 20*l.* a day.

The *Liverpool Journal* states, that there were "some seventy candidates for the office of superintending the levelling and making of sewers, that each and all of these sent testimonials of capacity and character from authorities competent to recommend, but that the sub-committee resorted to a very summary mode of disposing of their claims: that the question was not "What are they?" but "Who knows them?" A. B.—"Does any gentleman of the committee know him?" "None." "Knock him off?" C. D.—"Does any one know him?" "None." "Knock him off." Seventy were thus "knocked off," in the "twinkling of a bed post," and the remaining "five" would have shared the same fate, were it not for the prudent apprehension of Mr. Alderman Nicol, who apprized the committee that they ought to recommend some one. With characteristic facility they recommended the last, or nearly the last, five; but, on re-examination, it was discovered that none of these five would do, and the talk is, that on Thursday, Mr. Hartley was written to, to recommend a suitable engineer."

A report of the progress of the New North Docks shews the operations to be of much greater magnitude than is generally supposed, and that the whole of the nine new docks are in course of rapid completion. They cover an immense area, nearly the whole of which has been reclaimed from the strand of the Mersey. At the south end of this new range of docks there are three of them running eastward from the river; and these will form a chain communicating with the Leeds and Liverpool Canal. The eastern dock of this range is on the east side of Regent road; and it is probable that another may be formed between it and the canal on the east side of Great Howard-street. According to the *Liverpool Standard*, the walls round some of the docks are nearly at their full height from the bottom of the excavations, out of which, however, large masses of material have yet to be removed, chiefly of red freestone, the quarrying of which will, it is thought, go far to meet the expenditure. The walls are built up, to about the level to which the water will rise, of this stone; and above this they are of grey granite, in irregular blocks and pieces, presenting a patch-work appearance, like the outside wall of the Albert Dock, but of great strength, the mortar being milled, from the Halkin Mountain limestone, which sets rapidly, and becomes as hard as the rock itself. The discovery of the properties of this cement has already, it is said, saved much expense to the Dock Estate, as it appears that it is not requisite to hew the stones into square blocks as heretofore—pieces of any size or angular shape being applicable, provided they shew a smooth outward surface. The landing steps in the outward wall and the tops of the quays are of chiselled granite, and there is a vaulted or tunnelled passage at one of the landing-places for the conveyance of cattle, sheep, &c. The quays can scarcely be said to be yet formed, but on the sites which they will occupy, there are paved and macadamised roads, over a great length of which, including the margin of the sea-wall, a carriage may be driven. There are several large mortar-mills worked by steam. The lime is ground with fine clean sand, in circular revolving iron troughs, beneath huge circular grindstones, and the well-tempered cement is rapidly carted off, in a smoking state, to the several parts of the works where the masons are employed.

The site of the first of the new churches for Toxteth Park having been fixed on, the building committee have selected for its design one furnished by Mr. Hay. The style is middle-pointed. The building will consist of a nave with spacious aisles and clerestory. The roofs are high-pitched and shew all the interior timbers. In lieu of pews there will be open-benches for 1,100 people.——The amount already subscribed to the Church Building Society, which now exceeds 12,600*l.* was recently augmented by a donation of 500*l.* from the "Society for B. C. P. per J. B. Treasurer," into the secret of which somewhat cabalistic cyphers the *Express* thinks, it has "some inkling" though we confess our own darkness on the subject of this "kindly association in first-rate hands," who at all events evidently prefer doing good by something like stealth, rather than by that ostentation which is in truth the real motive of many charitable doings.

During the past year, the following houses and warehouses have been erected or in course of erection within the limits of the municipal borough. Mr. Rishton, the Town Surveyor, has supplied these statistics. A vast amount of building, however, has also been going on in the outskirts, at Bootle, Walton, West Derby, Old Swan, Aigburth, &c.—Under 12*l.* per annum, 710; from 12*l.* to 25*l.*, 2,328; from 25*l.* to 35*l.*, 236; from 35*l.* upwards, 186; total, 3,460; warehouses, 44. Comparative statement of the number of houses erected in each year since 1837:—1838, 1,052; 1839, 997; 1840, 1,576; 1841, 1,761; 1842, 2,027; 1843, 1,390; 1844, 2,450; 1845, 3,728; 1846, 3,460; total, 18,441. ——The following churches are now in course of erection at Birkenhead:—St. John's, at the cost of Messrs. J. Mallaby, J. S. Jackson, and W. Jackson; St. James's, at the cost of Messrs. W. Potter, W. Jackson, and J. W. and M'Gregor Laird; St. Anne's and another at the cost of Mr. W. Potter; and St. David's, by public subscription, originated by the Rev. J. Baylee, for the Welsh inhabitants. There is also a new church building at Seacombe. These, with the churches of St. Mary and the Holy Trinity, and a chapel at Oxton, lately opened, will comprise nine churches for the present population of 25,000, and Mr. W. Jackson and Mr. Potter have signified their intention to erect each an additional one next year.

## ON BRICK MOULDINGS.

A correspondent of the *Bury Herald* says:—

"In a county like ours, where there are no quarries and so many clay pits, and where consequently stone is so dear and scarce, and bricks, both red and white, so common, I rather wonder that brick is not more used for the finer mouldings in the place of stone. In former times, and it might be equally so now, mouldings of all kinds were highly ornamented, frames to windows, porches, chimneys, &c., were made of brick. Besides being much cheaper, and quite as durable as stone, they had this advantage,—that the most intricate patterns could be made nearly as cheap as the plainest; and also, that any colour might be used, if not in the brick itself, yet on the outside and burnt in. White brick round the windows, or at the corners of houses, proves a good foil to shaped flints; red brick to white, and *vice versa*.

I shall mention one or two instances of the use of moulded bricks. Westhorpe Hall, one of the first buildings of this class, was erected by Brandon, Duke of Suffolk, about the year 1500, who resided there with his wife, a king's sister and widow. Though hardly a remnant even of the ruins remains, yet fragments turn up which shew the beauty of the brick mouldings. They are of a very hard and compact white brick, which retains its original sharpness, and some of them, having the duke's crest in relief upon them, still ornament a bridge of the same date as the hall. The other example is West Stow Hall, built by the same duke, the gatehouse of which is a noble specimen of brick building. As an example of the use of brick mouldings in churches, I may name Ixworth Thorp, a doorway of which church has its mouldings and circular (Saxon?) arch, formed of red brick."

The duty on bricks, levied as it now is, prevents any attempt at improvement, or experimental endeavours.

English Buildings in China.—The *Edinburgh Register*, in noticing a "Club-house, Victoria, Hong Kong," executed by Mr. George Millar from designs by Mr. George Strauchan, architect, Edinburgh, remarks, that though, five years since, on "Hong Kong," the "Island of Fragrant Showers," the only buildings were a few fishermen's huts and a low mandarin's house; already large and elegant merchants' houses and gardens extend a couple of miles along the sea beach; commodious barracks, and Catholic, Episcopalian, and Presbyterian churches, are to be seen, with colleges for Chinese youths, and a mosque for Mussulman natives. Bungalows adorn the hill sides, with thriving plantations, and a drive equal, in picturesque, to our own, "Queen's Drive" [round Arthur's Seat, from Holyrood] encircles the island, commanding views of the mainland of "Quang Tung," the estuary of the Canton river, with its hundred islands, and a wide expanse of ocean.

## BRISTOL AND WEST OF ENGLAND ARCHITECTURAL SOCIETY.

On Monday, the 18th inst., a general meeting of this society was held at the Institution, in Park-street, Bristol, the Venerable the Archdeacon Thorpe in the chair. The Rev. Eccles Carter, honorary secretary, read the Report of the committee for the past year, from which it appeared, that the society was in a satisfactory condition, and that its usefulness was recognized by application for advice in respect of St. Andrew's Church, Chippenham; St. Luke's, Brislington; Markbury Church; Two Mile Hill Church, and others; they had occasion to regret, that at St. James's Church, Bristol, some suggestions made by them had not been carried out.* At Two Mile Hill Church, the ringers were admitted to the loft by a door not connected with the church; to which the committee was opposed, as tending to separate the ringers from the services. The restoration of the upper part of Dundry Church was in their hands, but was stopped by the weather.

The chairman having addressed the meeting at some length on the topics mooted in the Report, a committee for the new year was elected, and other routine business transacted. After this, Mr. F. Niblett read a paper on the architecture of fonts.

Before the meeting broke up, it was resolved, that a paper, by the honorary secretary, on architectural societies, and the hindrances in the way of their successful operation, read at a previous general meeting, should be printed and distributed. A part of this paper will be found on another page.

## OXFORD.

Strong efforts are being made here, in favour of a national measure for the establishment of general cemetries. At a meeting of the town council, held on the 14th, a form of petition was brought up, and after some opposition, agreed to. Those who opposed it, did so on the ground, that it was "an attempt to agitate the people against the clergy, and to oppose those who ought to be treated with respect and love;" and said, they thought that those to whom they looked for religious solace and support ought not to become the objects of a *quasi* political warfare. And so think we too; but the fact is, no such feeling actuates those who would get rid of burials in towns. Existing interests must of course be protected.

At the same meeting, the following report from the Sanatory Committee was read: At a meeting of the Sanatory Committee held on the 13th inst.—Resolved, "That Alderman Butler be chairman of this committee. That this committee desire their chairman to call the attention of the next council to the present inefficient supply of soft water; to the imperfect sewerage and house drainage; and the greatly increased mortality, which the committee believe to be chiefly consequent upon these evils. That the individual members of the council be requested to report to the sanatory committee all nuisances which they may be cognizant of, and which they consider to be prejudicial to the health of the town, in order that the same may be registered, and the proper steps taken for their abatement. The chairman is requested to summon this committee on an early day, to take several matters into consideration."

The drainage and sewerage of Oxford is exceedingly bad, and, with the defective supply of water, sufficiently accounts for the greatly increased mortality.

Monumental Sculpture.—There seems to be a want of invention amongst our modern sculptors, not so much in the mere outline of monuments (their forms are numerous enough) but a want of something that would at once speak to the imagination. It is yet left for some man of mind to illustrate death from the history of our holy religion—to sculpture that sleep after life's long storm, and call from the marble such forms as we believe we shall meet with in heaven.—*Miller's Country Life.*

* The restoration of this Norman church, to which we alluded some time since, is now completed. Two ponderous and discordant galleries at the west end, have been put up without the good will of the architect employed.

## New Book.

*The High Pressure Steam-engine Investigated.* By Dr. Ernst Alban. Translated by W. Pole, F.R.A.S. Parts I. and II. Weale, London, 1847.

Some may perhaps wonder, the translator says, at being referred to the writings of a foreigner, and to the results of foreign experience, for information on a subject so essentially English as that of the steam-engine. One reason, however, is at once apparent: "ever since the time of Newcomen, the attention of the English has been almost exclusively directed to that modification of the steam-engine which depends for its source of power principally upon the condensibility of steam, namely, the low-pressure condensing engine, in which a very moderate elasticity is used. The other great class, comprising that variety of engine which owes its efficiency principally to the elasticity of the steam,—the high-pressure engine,—is (or at least was a very few years ago) scarcely known among us in comparison. While we find the condensing engine studied carefully, treated of most voluminously, and manufactured by wholesale, we deplore the neglect which the high-pressure engine has suffered;—we look in vain for information upon it; and we are scarcely able to point, even in the present more cultivated field of locomotives, to a solitary specimen deserving the name of an economical producer of steam power."

The author maintains, that the high-pressure is more safe and more economical than the low-pressure condensing engine. He proceeds first to examine the objections brought against the former, dwelling especially on its alleged danger; discusses the causes that tend to produce explosions, and shews the errors often committed in the manufacture of vessels for the generation of high-pressure steam. He then points out what he considers the advantages of the high-pressure engine; and afterwards treats in detail of the boiler and the furnace The third and fourth parts, to conclude the work, will contain, the translator says, the author's views as to the construction best adapted to secure the ends proposed, namely, safety and economy.

## Correspondence.

### THE ROYAL MEDAL FOR ARCHITECTURE.

Sir,—Having observed your willingness to make public any remarks that are conceived with an intention of increasing a knowledge in "*Fine Art* Architecture" perhaps you would kindly insert the following ideas in your valuable journal:—

Being a competitor for the Royal Gold Medal for 1846, given by her Majesty through the Institute of Architects, and appropriated by them as a stimulus for the juvenile branch of the profession of architecture, I would humbly suggest that (after the gentlemen to whom they may be referred for selecting the best design have pronounced their decision), the whole of the designs would be exhibited, *at least* to the competitors themselves. This would, in my opinion, and to speak for myself, be a kind of reward to the unsuccessful, for the labour they may have bestowed on their respective drawings, and would in very many ways be productive of good results to the rising members of the profession. I am totally ignorant as to the course the institute may think it right to adopt, but if I may be allowed to make a suggestion, would suggest that the committee of selection should point the *principal* objections to, or defects in the designs generally, embracing not only the elevations, but the arrangement and construction, &c.: this would make the awarding of the Royal Gold Medal a source of instruction and profit even to the unsuccessful, and in some instances might be better in after life than even gaining the prize. I am, Sir, &c.,

London, Jan. 19th, 1847. "Nemo."

### DALSTON INSTITUTION COMPETITION.

Sir,—Referring to the communication you have already published on this subject, I can state that the commissioners were distinctly told at the time of their receiving the drawings sent in competition, that a building such as their *written* instructions set forth could not be built in the vicinity of the metropolis for twice the outlay (1,500*l.*) to which they judged right to restrict the competing architects.

A building such as their printed prospectus described might possibly have come within their mark, but that one required by their pen and ink instructions and outline plan was plainly far beyond the scope of their so described intended (?) outlay, of which fact they were advised to assure themselves by reference to similar institutions of recent date, whose names were also placed before them.

Let us hope that for their own credit they have erred through ignorance rather than through design; be that as it may, somebody must pay for the trouble given in furnishing quantities and making out the dozen and a half estimates for the carcass only, given in your number of last week!—Your constant reader,

Tuesday, Jan. 19th, 1847. Q.

Sir,—I observed a letter from a correspondent of yours, calling himself "Alpha," in reference to the Dalston Literary Institution competition, and complaining of the result. But I would ask him what else he could expect from a committee so utterly ignorant of what is due for professional exertion, as to suppose that any architect could be paid even his necessary expenses for such an object by the paltry premium of 10*l.*, which they offered through your columns? "Alpha" should have known, that in the first place he was rendering himself amenable to the decision of men without one idea of that upon which they pretended to judge, and in the next, that he would have to contend with no member of the profession of any respectability, and would therefore expose himself to all sorts of tricks and chicanery.

Are not rumours afloat of a similar transaction in the competition for a new church at Battersea? This was, I believe, a "close" competition, and it is therefore more difficult to reach the facts of the case.

It is to be hoped, however, that continued exposure will, in time, put a stop to these nefarious proceedings. I am, Sir, &c.,

Jan. 14th, 1847. An Architect.

## Miscellanea.

Stained Glass in Leeds.—At the parish church of Leeds two new lights at the east end, each consisting of three long openings, have been filled with stained glass, executed by Mr. Wilmshurst. These occur on each side of the centre, or original window, which is filled almost entirely with ancient glass. The new light, on the north side, contains some of the principal events in the life of our Saviour, each composition being under a canopy. The subjects are; "The offering of the Wise Men," "Christ disputing with the Doctors," "Blessing Little Children," "The Tribute Money," &c. The south light exhibits some of the principal events in the life of St. Peter, in whose name the church is dedicated; as, "The Deliverance from Prison," "The Charge," "The Draught of Fishes," &c., in all, nine subjects. The tracery of the windows is filled with the representations of angels, scrolls, &c. There are also six panels, one at the bottom of each opening. Those at the four sides contain emblems; and in each of the central panels is an inscription upon a scroll, intimating that the windows are the gift of Mr. Blayds, and sacred to the memory of his two elder sons, who respectively died in the years 1842 and 1845. The colours, especially the blue, red, and ruby, are very brilliant; and the whole is creditable to the taste and execution of the artist.

The Morgan Testimonial.—The statue by Mr. J. Evan Thomas, selected by the committee, as we mentioned last week, is to be executed in bronze. The premium of 30*l.*, offered for the second best design, was awarded to Messrs. Haines and Co., builders, of Southampton.

Competition.—Designs are wanted for a club-house for the Army and Navy Club, as will be seen by advertisement in our present number.

Holborn Hill Viaduct.—The company formed to effect this important improvement, have postponed their application for an Act till next session.

PROJECTED WORKS, &c.—Advertisements have been issued, through the past week's newspapers, for contract tenders for the erection of new buildings at the Hackney Union Workhouse; the various works to be done in rebuilding Ince Hall, near Chester; the repair of about 50 miles of the Bromyard roads, in 8 districts; the supply of about 2,800 tons of broken granite at Leicester; of 5,000 tons of malleable iron rails, 1,800 tons of cast iron chairs, 120 tons of spikes, and 77,000 Memel or larch sleepers, for the Leeds and Thirsk Railway; and 750 tons of iron rails, for the Taw Vale Railway and Dock Company; also for the whole works, in separate tenders, of about 6 miles of the Bristol and Exeter; a portion of the Sheffield and Goole, &c., near Barnsley; 8 miles of the Birmingham and Stour Valley; 6¼ miles of the Ambergate and Boston, &c.; 5 miles (the remainder), of the Edinburgh and Northern; and 11 miles of the North British, at Dunse, Tranent, and Cockenzie; also for 125 tons of spermaceti and other oils for light-houses at Dublin, &c.

KAMPTULICON.—We understand that the Kamptulite Pavement is ordered to be laid down for the carriage drives at Buckingham Palace and Osborne House. The walls of the riding house at Windsor Castle are also to be lined about 6½ feet from the ground, with the Kamptulicon Planking, as a protection from injury in case of accidents. This material would seem to be applicable for many useful purposes. It is composed of cork and India-rubber.

THREATENED REMOVAL OF WESTMINSTER BRIDGE.—We need scarcely say, that we have heard the announcement, that the bill for the removal of Westminster Bridge *will not be proceeded with*, with great satisfaction. The secret history of this extraordinary proposal would be amusing if not instructive.

A TRIFLING DIFFERENCE OF OPINION.—Three tenders were delivered the other day for rebuilding parts of two houses in Clare-court, Drury-lane. The highest, Chesterman, was 318*l.*; the second, Dean, 235*l.*; and the third, Hooper, 138*l.*

THE WELLINGTON STATUE.—Now that Parliament have met, it is to be hoped that the western entrance to London will no longer be disfigured, but that the statue will be immediately taken away, and that the architect of the arch will be commissioned to make that structure complete, in accordance with the original design.

NATIONAL GALLERY.—We learn with much regret, that Mr. Eastlake, R.A., has resigned his appointment in the National Gallery.

## TO CORRESPONDENTS.

"*N. M.*"—If the "fire bricks" be carefully set in cement, on a sound foundation, the floor will be less penetrable by moisture than if pointed with lime. A sound foundation, however, is of the greatest consequence. If asphalte be procurable for setting the bricks, we should recommend it. A thin bed of concrete with a layer of broken glass in it, to keep back the rats, would make the whole perfect.

"*Naves of Wheels.*"—Although somewhat out of our path, we have, in consideration of the position of the inquirer, taken some pains to ascertain if cracks in wheel naves can with *certainty* be prevented; and we find, in the opinion of those best informed, that they cannot.

"*G. G.*" (Portsmouth.)—Write to the Secretary, Great George-street, Westminster. The Number is out of print.

"*G. B. J.*"—We formerly published lists of prices of materials regularly, but found reasons for discontinuing them. The other suggestion shall be considered. We shall be happy to see the lithograph.

"*Subscriber.*" (Bedford.)—To prescribe for a smoky chimney without seeing it would be useless: take a good pinion on the spot.

"*Rex.*"—The houses cannot be built as shewn on the plan sent.

"*A Measurer.*"—Next week.

"*E. W. F.*"—We avoid giving recommendations.

"*Gamma.*"—Write to Secretary of Society of Arts, Adelphi, and he will return full particulars.—"Orders" may be drawn in name of the publisher, Mr. Charles Wyman.

*Received.*—"Philocrome," "A friend to fair and impartial competition," "W. H." (Maningtree), "Mr. P." (Pimlico), "E. C. S. B.," "Lithographed View of the Priestwood Church, Bucks: with Schools and Parsonage House," by Mr. E. B. Lamb, Architect; "Report on Cordes and Locke's Condensing Rotary Steam Engine," by Mr. Josiah Parkes, C.E.; "Punctuation reduced to a System," by William Day. Olliver: Pall Mall; "Railways for the Many, and not for the Few; Second Edition, with some Remarks on Building Societies;" by James Ward, Esq. Smith and Elder: Cornhill; Prospectus of the "Amateur Musical Society," Mr. Henry Leslie, Honorary Secretary. The object of this society, is the formation of a full orchestra, to meet weekly during February, March, and April, for the performance of classical composition. With Prince Albert, the Duke of Cambridge, the Earl of Westmoreland, &c., among the members; the Earl of Falmouth one of the violins; Lord Arundell, the trumpet; the Hon. George Cadogan, the bassoon; Lord Fitzgerald and the Marquis of Kildare, among the violoncelli; and the Duke of Leinster and Sir Alexander Macdonald, two of the bassi,—this may justly be called, *the* "Amateur Musical Society," and be placed among the "events" of the day.

"*Books and Addresses.*"—We have not time to point out books or find addresses.

*** Correspondents are requested to address all Communications to the EDITOR, 2, York-street, Covent-garden.

TO PROVINCIAL READERS.—In reply to complaints of the irregular delivery of THE BUILDER in provincial towns, we beg leave to state that it is invariably published by seven o'clock on Friday morning; and that the irregularity complained of rests entirely with the parties through whom it is obtained.

NOTICE.—CHEMISTRY AS APPLIED TO CONSTRUCTION.—The Builder of next week will contain the first of a series of papers on this important subject, by Professor Griffiths, of St. Bartholomew's Hospital.

## MEETINGS OF SCIENTIFIC BODIES

*During the ensuing Week.*

MONDAY, Jan. 25th.—Royal Institute of British Architects, 16, Grosvenor-square, 8 P.M.

WEDNESDAY, 27th.—Society of Arts, Adelphi, 8 P.M.

THURSDAY, 21st.—Royal Society, Somerset House, 8½ P.M.; Society of Antiquaries, Somerset House, 8 P.M.


## ADVERTISEMENTS.

TO BUILDERS, DECORATORS, PAINTERS, &c.

**DEPOT of FRENCH Paper-Hangings.**—M. JULES RIOTTOT begs to inform the Trade that he has opened a Depot in London for the sale of FRENCH PAPER-HANGINGS, from his Manufactory at Paris, and will feel obliged by the inspection of the stock now on hand. The patterns will be found most suitable for this market, and the prices very moderate. S. BARLOW, Agent, 71, Great Russell-street, Bloomsbury.

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N.B. To expedite the procuration, personal application at the office would in all cases be better, the party bringing with them the abstract of title, plans, &c.

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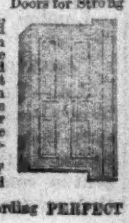

all secured by his Improved Detector Locks, throwing from 2 to 20 bolts, which defy the skill of the most experienced burglars. A large Assortment of Fireproof Safes, &c., on Sale. Made to order at the shortest notice, at prices 25 per cent. under any other house in London, at his Manufactory, 126, Aldersgate-street.

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**DEANE'S TWO-HOLE BLACK PENS,** which are unequalled for their durability and easy action, are adopted by the gentlemen of the Stock Exchange, and the principal bankers, merchants, and public companies of the city of London, besides several of her Majesty's judges, the most eminent counsel and the reverend the clergy. Their cheapness and popularity have induced many unprincipled people to put forth imitations of the genuine article, which are equally useless to the purchaser, and disgraceful to the vender. The public are therefore cautioned, and respectfully requested not to purchase any as DEANE'S GENUINE TWO HOLE BLACK PENS, unless each pen is stamped, "G. and J. Deane, London-bridge," and the box, which contains exactly twelve dozen, has thereon a variously coloured label, inscribed,

"G. and J. DEANE'S 2 Hole Black Pens, 48, King William-street, London-bridge."

**JENNINGS'S SHUTTER FASTENER.** Shop Fronts are more damaged and disfigured by the Shutter Bar than from any other cause. Bars are a trouble to put up and take down, and troublesome when down. JENNINGS'S REGISTERED SHOP SHUTTER FASTENER supersedes the destructive Bar, and answers the purpose also of a shutter shoe. The shoes and fasteners being made of brass, afford greater protection to the corner of the shutter, and leave no rusty deposit on the stall-board in damp weather. Hundreds of shops have been secured by the inventor, and testimonials of their ease and efficiency may be obtained from the occupiers. A front, containing eight shutters, secured for 24s., or a new front shod and secured for 40s. A liberal discount allowed to Builders, Ironmongers, and Painters, who introduce it to the notice of persons whose shops they decorate.—To be had of the Inventor, 29, Great Charlotte-street, Blackfriars-road, or of any respectable ironmonger.

SNOXELL'S PATENT SAFETY REVOLVING WOOD SHUTTERS.
Manufactory, 96, Regent-street, and 131, Chancery-lane.

**THE Patentee having fixed a great number** of his shutters in London, and given universal satisfaction can confidently recommend them both for security and durability, the edges being sheathed with Iron. Their construction is so simple that the largest establishment can be opened or closed with the greatest possible ease without the use of machinery. Their superiority over other revolving shutters consists in their great strength and stiffness, being without metal hinges, consequently cannot rust, buckle, be strained, or get out of order, and are safer. Persons dissatisfied with the patent rising gear now used for iron shutters can have it removed, and the shutters made to draw up in any part of the premises with the slightest exertion, without machinery, thereby avoiding the unpleasant use of oil.

INJUNCTION.

**BUNNETT and CORPE'S Patent REVOLVING IRON SHUTTERS.**—Since the verdict found in favour of the Patentees, in the Court of Exchequer, in the action tried by order of the Court of Chancery, that Court has granted a perpetual Injunction for restraining all infringements of this Patent, and therefore all parties are hereby cautioned against infringing the same.

THE PRICES ARE GREATLY REDUCED, and BUNNETT AND CORPE'S PATENT IRON SHUTTERS ARE THE CHEAPEST AS WELL AS THE BEST. They are made with convex laths, if required. The worm and wheel motion for raising and lowering revolving iron shutters (as secured by this Patent) is the only safe and durable mode of effecting that object. In large shutters it is indispensable.

Some thousands of Bunnett and Corpe's Shutters have now been put up, without a single complaint of their want of strength or security; and nine years' practical experience (during which they have adopted every real improvement) enables the Patentees to challenge comparison with any others. They will guarantee all Shutters put up by them to keep in order, and last twice as long as any with thin convex laths.

B. and C. also manufacture REVOLVING WOOD SHUTTERS the Patent for which has expired), at the same prices as other makers, but greatly superior, being fitted with their patent raising gear, and proper metallic hinges, without which no shutter can be safe or durable.

BUNNETT and CORPE are likewise Patentees and Manufacturers of METALLIC SASH-BARS, MOULDINGS, &c., IN BRASS, COPPER, OR ZINC, FOR SHOP FRONTS, WINDOWS, SKYLIGHTS, AND VARIOUS OTHER PURPOSES.

Shop-fronts fitted with Iron Shutters, Patent Brass or Zinc Sashes, Plain or Ornamental, handsomely Engraved, Moulded, Stall-board Plates, best Plate Glass, and Internal Brass Fittings of all kinds, superior in quality and workmanship, and lower in price than any other house. Contracts taken in Town or Country.

Metal Drawing and Stamping for the Trade.

Office at No. 26, Lombard-street, London; Works, at Deptford, Kent.

Steam-engines, Sawing, Planing, and Moulding, Cutting-machines on Improved Plans, especially adapted for Builders' purposes, may be seen in operation at the Works.

**PORTER'S CORRUGATED and PATENT GALVANIZED IRON ROOFING WORKS,** Southwark-bridge (and the Grove), Southwark. At the above Works, the Public are secure in having the superior make, and by the Patent process of Galvanising Iron as first introduced into this Country, with many improvements in its application to Roofs, Buildings, &c. Every description of Building, Railway, and other Iron and Smith's work Manufactured of the best quality. Iron Fence and Hurdles as usual.—The Trade Supplied.

By Her Majesty's Royal Letters Patent.

**MOREWOOD and ROGER'S PATENT GALVANIZED TINNED METAL.**—This article was at first sold under the name of Galvanised Tin Plates, but the Patentees finding that the public, in some instances, overlooking the word Tin, confounded the article with Galvanised Iron, and that the character of their metal has thereby sustained injury, are desirous of giving it a name so distinctive as to prevent such mistakes, and consequent disappointment to purchasers in future. They therefore respectfully request purchasers to inquire for MOREWOOD and ROGER'S PATENT GALVANIZED TINNED IRON. In order to enable the public readily and at first sight to distinguish between the two metals, it may be well to inform them, that Galvanised Iron has a plain, zinc-like appearance, while M. and R.'s Patent Galvanized Tinned Iron has a smooth crystalline surface.

MOREWOOD and ROGER'S PATENT GALVANIZED TINNED IRON, Patronized by the Admiralty, and the Honourable Board of Ordnance, being extensively used in her Majesty's Dockyards, at the Tower, and elsewhere, for every variety of Roofing, and other purposes, where a strong, light, cheap, and durable material is required.

It has been found by experience that this article is beyond all comparison superior to zinc; possessing, as it does, all the advantages arising from the strength and firmness of iron, combined with perfect immunity from rust; whilst it is free from the very serious objection which applies to zinc, viz. its contraction and expansion, consequent upon every change of temperature, and from which circumstance leakage must of course result.

This material is not likely to be destroyed by fire, as is the case with zinc and lead, which melt and run down, thus freely admitting fresh air to the fire, and causing it to burn more fiercely. It is therefore obviously well adapted for all the purposes above-named, and most importantly so, when there is the possibility of fire. It is also peculiarly suitable for chimney-tops, gutters, spouting, and out-door work generally, possessing the strength of iron, without its liability to corrosion. It is by far the most economical metal roofing that can be obtained, in consequence of its strength, as it may be laid without boards, and upon the lightest rafters.

This mode of preserving metal from rust does not only apply to sheet-iron, but also to manufactured iron in any form, as bolts, nuts, hinges, nails, &c. &c.

For full Particulars apply to S. HOLLAND, 54, Gracechurch-street.